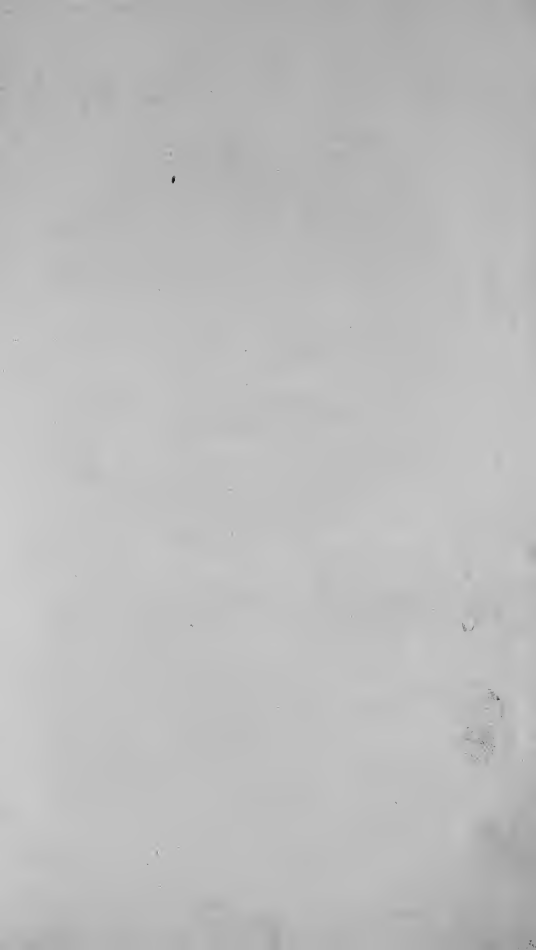




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MEMOIR

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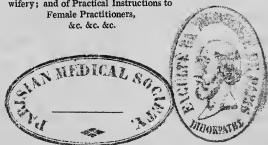
EXTRA-UTERINE GESTATION.

BY

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wifery; and of Practical Instructions to
Female Practitioners,
&c. &c. &c.



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TO

JOHN WEIR, M.D.,

SENIOR PHYSICIAN IN, AND LATELY ONE OF THE COMMISSIONERS FOR THE
MEDICAL DEPARTMENT OF, THE ROYAL NAVY.

DEAR SIR,

THERE are many to whom, as practising the art I follow, men of great ability, and not by me alone, but universally esteemed, I might with more seeming propriety, in respect to the subject matter, have offered this dedication. I could not, however, forego the pleasure, originating, no doubt, in a little selfishness, and yet with a leaning to a better quality of our nature, of offering it to you; discharging thus a debt of gratitude, in as far as such a trifle can well accomplish; and thus avail myself of the only opportunity time and circumstances may now admit, of expressing to you the esteem in which I hold you personally, as regards myself, and the respect arising out of a long acquaintance, and therefrom a deep conviction that you possess the rare qualifications of a public mind.

Permit me then to hope that you will view it in this double light ;
our position in life removing any suspicion that my dedication can
be one of common place, but rather expressing a truth which you
yourself would very naturally be the last to discover.

I remain,

With sincere regard,

Your much obliged and faithful Servant,

W. C.

TO

SIR WILLIAM BEATTY, M.D., F.R.S., F.L.S.,

PHYSICIAN IN THE ROYAL NAVY, AND LATE PHYSICIAN,
ROYAL NAVAL HOSPITAL, GREENWICH.

DEAR SIR,

IF it be a weakness, I hope it is not an unamiable one, that we thus usher into the world our literary labours, heralded by the names of those whom we publicly or privately esteem. It is a very ancient usage; and taking advantage of its antiquity, I venture to place your name, together with one much esteemed, at the head of this little Treatise. But in truth, my chief object is, and I express it frankly, to thank you, by the only means in my power, for favours received; and to assure you of the personal esteem and regard of,

DEAR SIR,

Your much obliged and faithful Servant,

W. C.



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EXTRA-UTERINE GESTATION.

LITERARY HISTORY.

SYNON.—*Conceptio Vitiosa, Bianchi; Grossesse par erreur de lieu, Baude-
locque; Grossesse contre nature, Foderé; Exfoetation, Good; Grossesse Patho-
logique, St. Hilaire; Aberrant Gestation, Granville; Misplaced Gestation, A.
Thomson.*

It were superfluous to offer anything like a formal defini-
tion of a subject so familiar to the profession, were it not
necessary to consult the interests of the tyro in medicine.
At present, therefore, it may be proper to premise, that in
fruitful coition the *ovulum*, or the dormant elements intended
for the formation of a new being, and contained in the ovaries
of the female, are called into action by the influence of some
principle in the male semen, and after various periods in dif-
ferent animals, transferred into the uterus. When, however,
nature is interrupted in her operations, and the product of
impregnation does not enter the organ destined for its recep-
tion, the ovum, as may be learned from abundant evidence
contained in the following pages, may attain a certain degree
of development, or the embryo may even be brought to matu-
rity, either in one of the uterine appendages, or in connection
with them in the abdominal cavity; and the pregnancy is
then said to be *extra-uterine*, to which term an adjective is

prefixed, to designate the organic relation, or particular locality of the product.

As the term extra-uterine gestation, even in the present day, is too often used without any precise limits, in this Memoir I wish it to be understood as referring to those cases only, in which the ovum has never entered the uterus. Such deviations are frequent in the female of our race, and that of the inferior animals is not exempt from them.

In the writings of Albucasis of the eleventh century, we have the first recorded, though not indisputable evidence, of extra-uterine, or misplaced pregnancy in the human female.¹ This author, as may be learned from his writings, simply states the fact of an abscess having formed at the umbilicus, from which foetal bones had been extracted, in a patient in whose uterus the foetus died, in two successive pregnancies. No opinion is offered regarding the nature of the case in question, which may be attributed to the occurrence of such pregnancies being in those times most probably unknown; nor can it be gleaned from the observations of the author, whether after one of those gestations the delivery had been natural, or if the bones of both the foetuses had passed through the abdominal parietes; which last is, perhaps, the most natural inference, since it is stated that *many* had been extracted, and that the process of depuration had continued for a long time before the patient was restored to health. And as it is said that in both pregnancies the foetus had died in utero, it might be supposed that in consequence of rupture of the organ they had thereafter, on one or both occasions, escaped into the abdominal cavity; but as the narration of the case does not bear that the patient had met with any accident, and that there are no symptoms mentioned characteristic of such an

¹ Ego quondam vidi mulierem, quæ grávida fuerat, foetus in utero ejus moriebatur, deinde alia insuper vice grávida facta est, deinde moriebatur foetus ille alter etiam et accidit illi post longum tempus tumor in umbilico ejus, qui inflatus fuit, donec aperuit et pus produxit. Ex loco egreditur os; deinde præterierunt dies aliquot, et egreditur os alterum. Ego igitur opinabar, hæc esse ex ossibus foetus mortui. Vulnus igitur investigavi, et ex illo ossa multa extraxi; mulier autem optime se habuit, adeoque vixit illo modo longum tempus, paucopure ex illo loco producto. Lib. ii. sec. 76.

injury, or of retroversion of the uterus even, the inference is perfectly legitimate that in both gestations the ovum had not entered the uterus, but had been retained in one of its appendages, or developed in connection with them in the peritoneal cavity.

Though the contrary has been asserted,¹ the literature of our profession furnishes not a few instances of extra-uterine gestation among the lower animals. The earliest with which I am acquainted, happened during the sixteenth century in a cow, which conceived again during the retention of the extra-uterine calf.² In our own language, cases of this nature are recorded which occurred during the seventeenth century in a bitch; and thirty years subsequently, in a sheep.³ In the latter class of animals, I have recently been informed on good authority, that such occurrences are by no means rare. An author of eminence alludes to a pregnancy of this description in a hare;⁴ a thesis was published on the subject in the close of last century, from actual observation, in one of the canine tribe;⁵ and a continental periodical of reputation contains cases which occurred in sheep.⁶

After the case that has been translated from the writings of the Arabian physician, the next which has been observed among the female of our race is one that occurred to N. Polinus, in 1531; but it is of so questionable a description as to be undeserving of any serious criticism. The patient, we

¹ La science seroit en peine de fournir quelques exemples authentiques pour démontrer, d'une manière irrécusable, que chez les femelles des mammifères voisins et même éloignés de l'espèce humaine, le produit de la conception se soit développé hors de la cavité propre de l'utérus, la femme seule paroît soumise à cette sorte d'infirmité. Coste, vol. i. p. 383.

² Vacca quedam, cum parere vellet, minimeque id succederet, retento partu de novo concepit, et postmodum uno partu vitulum virum, atque ossa pleraque prioris quæ post consumptionem ipsius atque involucrorum remanserant, enixa est. The bones spoken of must have passed from the abdominal cavity, as it is not very likely that the animal would have conceived with a decomposed foetus in her uterus. Felix Platerus, 1597. De partium corporis humani structura et usu.

³ Phil. Trans. 1709, vol. v. p. 531. Abrid. edit.

⁴ Hallerî, Disput. ad Morb. Hist. et Curat. vol. iv. p. 795.

⁵ Gulielmi Josephi Dissertatio. Goettingæ, 1784.

⁶ Nouv. Journ. de Med. Chir. et Pharm. vol. v. p. 192.

are told, was a woman who, in fifteen years, produced nine children, and was in her tenth pregnancy, at the termination of which, labour supervened; and some time thereafter, through an aperture produced by an abscess in the left hypochondrium, a fine male child made its exit, and lived eighteen months; but on the third day after this unusual and incredible mode of separation, the mother died in great agony.¹

In the early half of the sixteenth century, Cornax dilated an ulcer which formed near the umbilicus, and extracted a semiputrid foetus, which had been retained for nearly five years. When the patient arrived at the termination of her pregnancy, pains resembling those of labour supervened, and were followed by an unusual sound in the abdomen, but the uneasiness did not subside. For four years, the abdomen continued distended, and painful; and at last, a foetid discharge issued per vaginam. First one abscess, and thereafter another, formed at the umbilicus: these were dilated by an incision eight inches in length, and the foetus removed. The woman recovered so well after the operation as to conceive again, and she had a natural delivery, but died some time thereafter. This case was considered by its narrator as one of rupture of the uterus; but as the pains continued after the unusual sound in the abdomen was heard, and that there is no mention made of there having been any hæmorrhage, it should rather be viewed as an instance of extra-uterine gestation.²

A case that may, upon the whole, be considered very characteristic, is related by Felix Platerus, in which the concubine of one of the sacerdotal order, at the close of her third pregnancy, endured for eight days pains resembling those of labour, which then subsided, without, however, being followed by delivery. After having for some time suffered from a variety of complaints, a small swelling, the size of an acorn, formed a little above the umbilicus; it was laid open, and an entire but semiputrid foetus extracted from the abdomen; and the hand thereafter introduced into the cavity for the re-

¹ Miscell. Nat. Curios. An. 1670, obs. 110.

² Sue Ess. Hist. &c., sur les Accouch. vol. ii. p. 61.

moval of any remaining portions of the decomposed mass. The patient was restored to health, and survived the operation a year.¹

Cordæus, who was contemporary with the last author, in his commentaries on the writings of Hippocrates, relates a remarkable instance of extra-uterine gestation. The patient, though long married, remained unfruitful until about the age of forty. The phenomena of parturition supervened at the usual period, but subsided without being succeeded by the expulsion of the uterine contents. At the age of sixty-eight, her constitution being undermined by age and protracted indisposition, she was unable to leave her bed; and three years thereafter she died, when a foetus encased in a stoney crust was found in the lower part of the abdomen, where it must have been deposited at least twenty-eight years previously. The stoney deposit, though considered by the narrator of the case as the uterus, must have been the original cyst of the foetus converted into a stoney incrustation, as happened with the foetus itself, or its cyst, in other cases to which reference will hereafter be made.²

Horstius, of the latter half of the sixteenth century, relates the case of a woman who, in March 1549, conceived a third time, and whose symptoms were favourable till the fourth month, when foetal movement became very active, and the abdomen much distended. Lumbar and abdominal pains supervened, and for two days increased so much that it was deemed expedient to call a midwife and other female attendants; but the former, finding no signs of immediate delivery, took her departure. On the forty-sixth day, foetal movement ceased, and the patient resumed the management of her domestic concerns; and in 1563, when the case was published, the remains of the foetus were still in the abdomen.³

In the writings of Primrose, is a very interesting and an

¹ Felix Platerus. De partium corporis humani structura et usu, 1597.

² Cordæi Comment in librum priorem Hippocrat. de mulieribus, p. 740.

³ Horstius, Oper. Med. Lib. xi. p. 564.

unusual case of this nature, in which a woman aged thirty, who produced one child after each of six impregnations, and twins at the close of her seventh gestation, conceived again in March 1591, on which occasion every thing seemed to announce a favourable result till the ninth month, when tormina and lumbar pains supervened. Professional aid was procured, but the abdominal uneasiness subsided, and was not accompanied by any of those changes usually attendant on parturition. Foetal movement also ceased, but the abdomen, more especially towards the right side, continued enlarged; and after some days, the patient was restored to health. The catamenia returned, and continued for two years to flow with regularity, when, in May 1594, the woman again manifested the usual phenomena of pregnancy, such as foetal movement and tumefaction of the abdomen. In the eighth month, the motions of the foetus became violent and irregular, with pain in the loins and lower part of the abdomen; but as in the preceding gestation, these efforts also terminated unsuccessfully. After a lapse of nearly three months, a hard and large tumour appeared in the abdomen, while that in the left side was still manifest and very troublesome. In June 1795, nature interposed to effect a separation betwixt the living and the dead, by the formation of an abscess to the right side of the umbilicus, from which, with a profusion of pus, foetal bones were evacuated. In August of the same year, it was resolved to open the tumour on the left side, whence the bones of the second foetus were extracted; and shortly thereafter, the patient was restored to her former state of health.¹

Hildanus records the case of a woman aged forty-five, who, after having produced eleven children without any unfavourable occurrence, conceived the twelfth time. When the period of her delivery approached, and the phenomena of parturition supervened, the event was very different from what had happened at the conclusion of her former pregnancies, as her efforts proved unavailing. From the middle of June 1608, when the pains first supervened, till the end of October 1609,

¹ Primrosii Morb. Mul. Lib. iv. p. 316.

when she was harassed by incessant severe pains, and renewed threatenings of sensations resembling uterine contraction, a large tumour gradually appeared in the region of the umbilicus, which was laid open, and the skeleton of a foetus extracted. Cicatrization followed, and the patient was restored to health. The case is attested by a magistrate, and other respectable persons.¹

Riolanus the younger, relates the case of a lady aged thirty-one, who, with the exception of a hard, slightly painful tumour the size of an egg or clenched hand, situated above the right groin, experienced no unusual complaint until she was about four months pregnant of her eighth child. January 2, 1604, she was seized with violent pain about the pubes, extending from the pelvis to the upper part of the chest, with occasional syncope, which continued till five next morning, when she died. The right Fallopian tube was found to have contained a foetus; but the uterus was healthy and uninjured.

The same writer relates a second example of this kind which occurred in 1638, when the patient was three months pregnant. She had such distressing pains for four months, that she died in violent convulsions in the seventh month of pregnancy. On dividing the abdominal parietes, the left Fallopian tube, much distended, and containing a foetus, presented itself.²

In a recent publication on Midwifery, a Professor of the art informs us, that the cases of Riolan are the first recorded examples of extra-uterine gestation, an opinion sufficiently disproved in the foregoing pages, and which must have been assumed in consequence of such illustrations as had been published before the time of this last writer being unaccompanied by dissections; or from these most essential investigations, where they had been granted, having been but imperfectly conducted, and as incorrectly described. The example quoted from Cordæus affords a sufficient proof of the incapacity of its narrator to conduct the post mortem examination; for here the

¹ Fabricius Hildanus, p. 908.

² Riolan. Fil. Anthropol. Lib. ii.

stoney case which contained the foetus was evidently confounded with the uterus of the parent. That, in cases of protracted retention of the foetus, however, and consequent pathological changes, it is no ordinary task to unfold the structures which may enter into the formation of, or unite with, the parietes of an extra-uterine cyst, is a fact which will be readily conceded by every man who has duly studied the subject. But Riolan was, at least, respectable as an anatomist; and, moreover, he had the good fortune to be called at a period of the gestation when the real character of the case could not have been mistaken. As proper data are wanting, it would be rash to condescend upon the particular variety to which each of the foregoing cases, except those related by Riolan, belongs; and to those of our profession who may be disposed to consider them examples of rupture of the uterus, it may be replied that, no such inference can be legitimately deduced from the detail of symptoms, which are not characteristic of this accident, whether arising from retroversion of the organ, or from its inordinate and violent action during parturition. What must further tend to convince the reflecting reader that the foregoing were no other than examples of some variety of extra-uterine pregnancy is, that though narrated by different practitioners, there is in almost all of them many points of striking resemblance, both in symptoms and termination. And, finally, had the cases in question been instances of laceration of the uterus, a large majority of them would have terminated, not by a restoration to health, but by the destruction of the patient:¹ in extra-uterine pregnancies, as will appear more satisfactorily in the sequel, the result has

¹ Of eight cases of laceration of the uterus in the practice of Dr. John Clarke, only one recovered; *Trans. Coll. of Phys., Ireland*, vol. i. p. 367. 1817. Of five cases of rupture of the uterus particularized by Dr. Blundell, none recovered; *Physiol. and Pathol. Research*. 1824. In Dr. M'Keever's practice, two in thirteen recovered; *Practical Remarks on Laceration of the Uterus and Vagina, with Cases*. London, 1824. Of thirty-four cases which occurred in the Dublin Lying-Inn Hospital, during Dr. Collins's mastership, only two recovered; *Pract. Treat. on Midwifery*. London, 1835. Two patients in eight recovered, in Dr. Ingleby's Practice.

been diametrically opposite, more especially in cases of long retention, which are the only examples that could have been mistaken for laceration of the uterus.

EFFECTS OF IMPREGNATION ON THE ORGANS OF REPRODUCTION, EVOLUTION AND TRANSIT OF THE OVULUM TOWARDS THE UTERUS.

THE notions are so vague, and the absurdities propagated regarding certain points connected with extra-uterine gestation so extraordinary, that for the elucidation of the subject, it may not be out of place here to offer a brief sketch of what is known regarding the function of impregnation when performed with regularity in the more perfect animals, that the various circumstances by which it would seem to be regulated may be contrasted with those which may be supposed to favour the occurrence of misplaced gestation.

To show the loose manner in which the subject is treated by some writers of the present day, we need merely advert to the sentiments of Professor Davis of the London University, who, as if deserted for once by his own natural talent for *verbiage*, borrows a Gallicism, and, to say the least, a most romantic idea,¹ to explain the origin of ventral gestations, viz. that the ovulum is precipitated among the abdominal viscera.²

Under what form the product of conception takes its departure from the ovaries, what period of time is required for its transit into the uterus, and what changes it undergoes in that stage, are points which, from their connexion with the subject of this Memoir, cannot be passed over without some notice. On these heads, however, we must be brief, since our data are derived, not from observations on the female of our own race,

¹ Dict. de Med. et Chirurg. Prat., vol. ix. p. 318.

² True ventral foetation takes place when the fecundated ovum, instead of being conducted into the uterus by means of the Fallopian tube, is found precipitated into the cavity of the abdomen. Obstet. Med. p. 993.

but *chiefly* from those made on the lower animals; and since the accounts afforded of those analogical facts by different philosophers, whose investigations, it may be presumed, have been conducted with the utmost regard for accuracy, are, nevertheless, so discrepant, as will immediately appear, that the greatest caution must be exercised in deducing inferences from them.

The human embryo, like that of all the more perfect animals, is asserted to be derived from an egg contained in the Graafian vesicle of the ovary, and, until lately, said to exist only in females who had attained maturity; but by very recent microscopic observations, it has also been discovered by Professor Carus of Dresden, in the ovaries of the foetus in utero.¹ After fruitful coition, one or more of these ovula, in consequence of changes induced in the female genitals, are dislodged from their cyst, and for the purpose of being fecundated, are brought into contact with the male semen. The Graafian vesicle, previously to the separation of the ovulum, enlarges and bursts; and thereafter its contents pass into the Fallopian tube, along which it is conveyed into the uterus. It is the general belief, that, previously to the entrance of the ovulum into the uterus the decidua is formed to establish an organic connexion betwixt it and the embryo.

The effect of sexual congress on the female genitals is to induce considerable excitement and consequent vascular turgescence, of which, when an animal is destroyed after prolific intercourse, we have clear evidence in the ovaries, Fallopian tubes, and uterus, which appear of a deep red colour, and continue so for some time. At the same period a change also occurs in regard to the relative position of some of these organs, by the fimbriated extremity of the Fallopian tube turning towards, and closely embracing, the corresponding ovary, to receive, on bursting, the contents of the productive Graafian vesicle. Though, in reference to the structure of the fimbriae of the tubes, there still remains some latent physiological fact, and that the change of position, it may be presumed, results

¹ British and Foreign Med. Rev., No. X., April, 1838.

from muscular action, yet it is the opinion of some physiologists, that the turgescence referred to, has some share in producing it. Haller, Hartsoeker,¹ and Walter,² demonstrated in the human subject, that the forcible injection of fluids into the blood-vessels of the genitals caused an approximation of the fimbriae and ovaries. Frequently this approach of the tube towards the ovary does not take place immediately after sexual congress. Dr. Haighton remarked, that in the rabbit it never happened earlier than nine hours after coition;³ nor, according to De Graaf, until after a lapse of twenty-seven hours.⁴ According to Cruickshanks⁵ and Haller,⁶ these changes have been observed to happen antecedently to sexual intercourse; and it is now the general belief, that approximation of these organs may take place independently of union betwixt the sexes, from mere excitement of the genital organs. In the human female, also, and that, too, without the influence of venereal orgasm, there is reason to believe that similar changes occur.

The ovarian vesicles of the female of our race, and of the quadruped, are filled with a viscid fluid, which, to the naked eye, appears to contain a little granular and flaky matter; their covering consists of two layers, and they are further protected by the peritoneum and the proper tunic of the ovary. Although, from the earliest ages, it was believed that the ovaries contributed something towards the formation of the embryo, yet, from the size of the Graafian vesicles, compared to the area of the Fallopian tubes, their transit by these channels was irreconcilable, wherefore various hypotheses were advanced regarding the formation of the first elements

¹ Et etiam in cadavere, si vasa earum (tubarum) repleveris, spongiosumque corpus distenderis, se ad ovaria convertunt, et adherent; *Element. Physiol. Halleri*, tom. viii. p. 28. Hartsoeker, *Suites des Conjectures, &c.*, 110.

² Burdach *Physiology*, vol. ii. p. 334.

³ *Phil. Trans.*, abridged, vol. xviii. p. 112.

⁴ Halleri, *Elem. Physiol.*, tom. viii. p. 28.

⁵ *Phil. Trans.*, vol. xviii. p. 129.

⁶ Halleri, *Elem. Physiol.*, tom. viii. p. 29.

of our race. In 1827,¹ by means of the microscope, the ovum was first distinguished in the Graafian vesicles of mammiferous animals. It is said to be generally placed towards the most prominent part of the vesicle in the centre of a granular production, under the form of a very minute spheroidal body, seldom larger than the two-hundredth part of an inch in diameter. Baer has not only determined the appearance of this body to be constant, but he has even traced the changes which it undergoes during the first days after sexual connection, and satisfactorily established its identity with the ova discovered in the Fallopian tubes and cornua of the uterus by former physiologists; and thus proved by actual observation, that the embryo derives its origin from an ovum already formed in the ovary previous to fecundation.

After sexual intercourse one or more of the Graafian vesicles, those probably most advanced in maturity, enlarge, and project beyond the surface of the ovary; and their contents, formerly transparent, now becomes viscid, tenacious, somewhat turbid, and of a reddish colour. If this enlargement be the result of venereal excitement, on the most prominent point of the coats of the vesicle the vessels converge towards the part at which rupture is impending, and which becomes less vascular. After a certain period, and previous to the rupture of the vesicle, a small opening forms in its coverings, through which its contents escape, to pass into the Fallopian tube. Authorities differ regarding the period at which this opening is formed in the vesicles of different animals. The vesicle of the sheep has been found ruptured two hours after sexual connection; that of the dog exhibited the same change, in one instance on the first day, and in others before the sixth, according to Haller; while by Prevost and Dumas, it was not observed until the seventh and eighth day.² Cruickshanks remarked this change in the rabbit two hours after coition; Haighton after forty-eight hours; and Coste

¹ Baer, *Epist. de Ov. Mam. et Hom. Genes. Lipsiae, 1827.*

² *Annal. des Scien. Nat. t. iii.*

betwixt the second and third day in the same animals. When the opening takes place, a little blood, owing to some vessels being injured, is mixed with the contents of the vesicle; and when this last is evacuated, its cavity is filled with coagulated blood.

About this period also the tunics of the vesicle become thicker, and the inner one more vascular; and from the latter originates a new structure, which completely fills, not only the cavity of the vesicle, but even protrudes through the aperture formed in it, constituting a dark red prominence like a nipple, which projects above the neighbouring parts of the ovary. This structure is, at first, of a pink red colour; and as the blood disappears, it changes in the human subject to a bright yellow, whence the term *corpus luteum* is derived. The size of this body varies in different animals; in the human subject it equals that of a hazel nut. By dissection it can be easily detached from the ambient structures: it gradually enlarges, and at last continues for a time stationary, after which it diminishes in size, becomes paler, and entirely disappears, leaving always in the female of our race a small cicatrix to denote its situation. The period required to complete its full development varies; and in the human subject this is thought to require two months. It is believed that in women, as also in the female of some other animals, a corpus luteum, and all the changes which precede and accompany it, may happen from mere excitement of the genitals, independently of sexual union; wherefore, during investigations connected with legal medicine, the presence of a corpus luteum simply, ought not, unless accompanied by other proofs of impregnation, to be considered as conclusive evidence of previous sexual connexion.

Of the changes experienced by the human ovum in its transit from the ovary towards the uterus, and during the first days of its residence in the latter organ, very little is known; but as, of late years, this interesting part of physiology has been investigated with much industry in several of the mammalia, and that in the incipient stages of their impregnations, in that of the human species, and of birds, there

is a striking analogy, we can now entertain, without any over-stretched deductions, more definite and consistent ideas on the subject. The yolk, and that part in which, after incubation, the rudiments of the bird are formed, with their membranous envelopment, constitute, while in the ovary, the principal part of the bird's egg. To this product, after it enters and passes along the oviduct, are progressively superadded the albumen, chalazae,¹ shell, and its lining membrane. The *cicatricula*, as it has been styled, or point in which the formation of the embryo commences, is readily distinguished in the larger ovula, and almost always occupies the same position on the surface of the yolk near the pedicle of the ovarian capsule. In the centre of the *cicatricula*, Purkinge² discovered a minute transparent vesicle, which, during the passage of the ovulum to the oviduct disappears, and leaves behind it a thin, delicate, transparent membrane, in which the embryo may soon be recognized. In all viviparous animals a vesicle, similar to that now described, and discovered in the common fowl, may be traced.

Although, from its minute size, the vesicle discovered by Baer, to be always present in the ovulum, cannot be readily traced, and that its analogy to the yolk and its accompanying parts in the egg of the fowl before development begins, cannot with certainty be established; yet, after the formation of the embryo commences, the changes which it undergoes prove, in the most satisfactory manner, its correspondence with the ovum of birds. The vesicle discovered by Baer, though smaller than that in birds, contains, nevertheless, all the essential elements of their ova, and of that of other oviparous animals, viz. a fluid granular mass or yolk, enveloped in a membrane. Of late years a vesicle, corresponding to that discovered by Purkinge in the centre of the *cicatricula* of the fowl, has also been detected in the ovulum of the mammalia by T. W. Jones, Coste, Purkinge, and others.

¹ Tubercula quædam pellucida grandini similia per cutem sparsa in ovum quoque luteo *χалаζαι* dicuntur a grandinis forma ac colore; Aristot. Hist. Anim. Lib. iii. c. 2.

² Symbol ad Ovi Ov Hist. ante incubat. Lipsiæ, 1830.

This body, which has been styled *germinal vesicle*, is very small, and can only be seen by the microscope; but it is very probable that in oviparous animals it occupies the situation in which the development of the embryo commences; that during its transit into the Fallopian tube it bursts, and undergoes, perhaps, similar changes with that in the fowl.

The ovum of the mammalia, when it reaches the uterus, is furnished with a covering which supplies the place of the shell in birds; and which, in the ovum of our race, is the chorion. By Baer this tunic is supposed to form a part of the ovulum before its escape from the Graafian vesicle; but it seems more reasonable to think, that, like the shell, it is superadded while the ovulum is traversing the tube. The rabbit and dog are the only animals in which as yet ova have been traced from the ovaries along the tubes into the uterus; for in the human female the difficulty of establishing with accuracy the date of impregnation, and the remarkable difference in the size of the production of conception, even at the same period of gestation in different cases, are such, that opportunities will rarely offer themselves of satisfactorily deciding this point. On the other hand, as already remarked, inferences deduced from what is known to happen in the lower animals, are to be received with great caution, since in them also the variety to be observed in the period occupied by the transit of the germ from the ovary to the uterus, does not, although it might *a priori* be inferred, appear to be regulated by the duration of their gestations. In the rabbit, for example, the date of the arrival of the ova in the uterus would seem to vary from the third to the sixth day; they are not formed in the uterus of the dog until the twelfth day; and not in that of the cat until the eleventh or twelfth day. Haller and others discovered ova in the uterus of the sheep on the twelfth, while Coste detected them there so early as the fifth day after conception: Hausman never detected ova in the uterus of the sow before the close of four weeks after conception, nor in that of the bitch before three weeks. To shew the necessity of being cautious in drawing conclusions on this subject in the human female, from what happens in

the inferior animals, it is only necessary to mention, in addition to what has already been stated, that ova are found in the uterus of the cow almost as early as in that of the sheep, though the duration of the pregnancy of the latter is little more than half that of the former. Sir Everard Home detected an ovum in the human uterus on the eighth day after conception,¹ but it has been supposed that there had been some error in the investigation, as Weber² and Baer³ had examined preparations eight days after sexual intercourse, without being able to discover the product of conception in the uterus. Is it not equally probable, however, that this part of the function is subject to the same irregularities in the female of our race as in that of the lower animals, and that the observations of those three physiologists are all accurate? Valentine thinks that the human ovum enters the uterus from the twelfth to the fourteenth day,⁴ and others are of opinion that this does not happen later than in the bitch; but if, by the inferences drawn from analogical facts, we are to be at all guided as to the duration of this part of the function in the female of our race, our conclusions ought rather to be deduced from a reference to what happens in the cow, whose period of gestation is the same with that of the human female, and not from what occurs in the bitch, whose pregnancy does not exceed sixty-five days.

¹ Phil. Trans. vol. 107, p. 252.

² Dr. A. Thomson, Ed. Med. and Surg. Jour., No. 140, 1839.

³ Brit. and For. Med. Review, January 1836, p. 238.

⁴ Cyclop. Anat. Phys., February 1838, Part 13, p. 454. A very instructive communication by Dr. A. Thomson.

VARIETIES OF EXTRA-UTERINE GESTATION.

Until 1824, when M. Breschet published his Memoir on the subject, extra-uterine gestation was divided into three orders, viz. ovarian, tubal, and ventral; but at the period referred to, this last writer added a fourth variety, under the denomination of *graviditas in uteri substantia*,¹ which by Meyer was afterwards styled *graviditas interstitialis*;² by Dr. Blundell *utero-tubular*,³ and *gestatio extra muros uteri*, by Dr. Granville; who, in his zeal for the reformation of obstetric nomenclature, has committed the ludicrous mistake of substituting the preposition *extra* for *inter*, which would have been unobjectionable, as the ovum is not without, but between the walls of the uterus.⁴ M. Dezeimeris again, has recently furnished a new arrangement, changed the names of two of the varieties which were formerly familiar to us, and with that passion for generalization so characteristic of his countrymen, added six or seven new varieties. However much men of mature years may feel disposed to laud M. Dezeimeris for his research, ingenuity, and pathological acuteness, I cannot believe that the tyros of the profession, notwithstanding their natural avidity for novelty, will feel at all obliged to him for very unnecessarily burthening their memory with new and useless names. The following is Dezeimeris' division: *first*, ovarique; *secondly*, sous-peritoneo pelvienne; *thirdly*, tubo-ovarique; *fourthly*, tubaire; *fifthly*, tubo-abdominale; *sixthly*, tubo-uterine interstitielle; *seventhly*, utero-interstielle; *eighthly*, utero-tubaire; *ninthly*, utero-tubo abdominale; and *tenthly*, abdominale, which is subdivided into primitive and secondary.⁵ The term ovarique im-

¹ Med. Chir. Trans. Lond. vol. xiii. p. 33.

² Répertoire Général d'Anatomie et de Physiologie, Pathologiques, et de Clinique Chirurgicale, vol. 1.

³ Lancet, vol. xiv. p. 611.

⁴ Granville's Graphic Illustrations.

⁵ Encyclographie des Sciences Medicales, vol. xiv., serie 2. Février, 1837.

plies ovarian gestation, or that the ovulum after its fœcundation has been retained in the ovary, which constitutes its cyst, and which, partly by the gradual development of the ovum, but principally by the deposition of materials in its substance, is progressively expanded to accommodate its contents. By the second, or *sous-peritoneo-pelvienne* variety, I would understand an ovum lodged subjacent to the pelvic peritonœum. The *tubo-ovarique* comprehends cases in which both the ovary and tube are concerned in the formation of the cyst which contains the ovum. By *tubaire* is to be understood tubal gestations, or those cases in which the ovum, after its entrance into the Fallopian tube, is there arrested and developed. Under the term *tubo-abdominale* is included cases in which the placenta, for example, or some other part of the ovum, is lodged in the tube, and the remainder—the fœtus perhaps, in the abdominal cavity. *Tubo-uterine interstitielle* is the term applied to those cases in which the ovulum is arrested in that portion of the tube which is included in the substance of the uterus. The variety *utero-interstitielle* comprehends examples in which we are informed that the ovum, after having been for some time arrested in that portion of the Fallopian tube which is included in the parietes of the uterus, had burst therefrom into the substance of the organ. Under the division *utero-tubaire* is included pregnancies in which, owing to a prolongation of the uterine cavity into the tube, whereby the latter is converted into a horn similar to what is observed among some of the lower animals, the fœtus has been developed and retained therein for the natural term of pregnancy. To constitute the variety *utero-tubo-abdominale*, a case is related in which the fœtus was found in the abdomen; the funis entered the right Fallopian tube, and traversed it into the uterus, where the placenta was placed. To the *primitive abdominal* variety those cases are referred in which, from the period of its fœcundation and separation from the ovary, the ovulum has been deposited and developed in the peritoneal cavity. The *secondary abdominal* comprehends cases in which the ovum, after its fœcundation, had been received, and for a time developed, in

the ovary, Fallopian tube, or uterus, and burst from the organ which contained it, in consequence of some pathological change, over-distension, external violence, or inordinate and violent action.

The arrangement of Dezeimeris is unnecessarily minute, and, in a practical point of view, useless ; since a large majority of the varieties particularized by him cannot be recognized by any diagnostic marks we are acquainted with ; and since in the remainder, though there be some symptoms which are very characteristic, yet these even, as must be conceded by every man who has studied the subject, are by no means infallible. To shew the inutility, or indeed inconsistency of branching out the subject into so many subdivisions, I will not hesitate to affirm, that on dissection even, the original organic relations of an extra-uterine ovum cannot in very many instances be unfolded, especially in cases of protracted retention of the foetus, where, from pressure and chronic inflammation, parts have united with the foetal cyst, which, at one period, had no connection with it. The correctness of this statement is supported by the fact, that some of our brethren, who were by no means deficient either in anatomical knowledge, or in industry for pathological investigation, were utterly unable to decide upon the particular variety to which some of those cases should be referred. Moreover, I can perceive no just reason, but, on the contrary, the strongest objection, as being extremely onerous to the memory, to the formation of a new term to meet the exigence of every case of extra-uterine gestation, according to the situation in which the ovum may be placed, or the relations it may have formed ; and where, perhaps, only one, or at most a very few examples, can be adduced in illustration. And, finally, no one can examine the arrangement of Dezeimeris without being struck with his avidity for generalizing ; for cases in which the ovum had entered, and attained a certain degree of development in the tube, but had, through a breach therein, partly or wholly escaped into the abdominal cavity, are, from this accidental change in their situation, brought forward as so many distinct varieties, and dignified with new names, instead of styling

them after their original locality, or including them in the subdivisions primary or secondary abdominal, which would have been more natural and less perplexing to the memory, whether the ovulum, immediately after its fœcundation, had been deposited in the peritoneal cavity, or had burst into it subsequently, after having, in connection with some other organ, attained a certain degree of development.

In the *sous-peritoneo-pelvienne*, or second variety of Dezeimeris, it is difficult to comprehend how the ovulum can insinuate itself under the peritoneum which is reflected over the organs situated in the brim of the pelvis. Through time, certainly, the connexions of the original cyst with the adjacent parts become so numerous, that when superficially considered, the ovum may seem to be enveloped by the layers of the broad ligament; but how it can pass under this appendage, it is impossible to conceive. There can be no hesitation in admitting the propriety of the term *tubo-ovarique*, for reasons on which it would be unnecessary to enter at present, as they will be sufficiently explained in the sequel, in the illustration of the arrangement which it is proposed to adopt in this Memoir. In the variety denominated *tubo-abdominale*, we can have no difficulty in conceiving a case in which a woman may have been so fortunate as to withstand the effects of a laceration of the tube,¹ and in which the placenta might not have been detached, or may have been so to a very trivial extent, under which circumstances the development of the fœtus might advance, though it be deposited in the abdominal cavity, and its placenta were still in the tube. Or, secondly, where the ovum is lodged in the fimbriated extremity of the tube, the embryo, owing to rupture of its surrounding membranes, may escape into the abdominal cavity, while its involucre are retained in the tube; and if the placenta has not suffered any *very considerable* detachment, there can be no reason why fœtal development should not advance. The literature of our profession furnishes cases in illustration of

¹ Med. and Phys. Journ. vol. lix. p. 377. Med. Observ. and Inquir. vol. iii. p. 341. Rust's Magaz. vol. xv. p. 126. Med. and Surg. Journ. Ed. vol. xlii. p. 350.

these views, but as they were all originally tubal, they will be noticed among the references under that division.

The examples brought forward in illustration of the variety *tubo-uterine-interstitielle*, are, *ipso facto*, tubal cases; since, though the ovum be in the uterine parietes, it is still contained in the tube; wherefore, there can be no reason why such cases should not be considered as tubal pregnancies, and included among the examples of that variety. As the instances referred to in illustration of the *uterine-interstitielle* division, and the preceding variety, were originally identical, and that the only subsequent difference is the accidental escape of the ovum into the substance of the uterus, in consequence of the rupture of the Fallopian tube, these also, though dignified with a new name, must be included among the references to tubal conception. Although I have objected to some of the preceding distinctions, yet I consider the variety *utero-tubaire* well founded, and easily understood, by adverting to the condition of the uterus in occasional instances of children at birth. In the young subject, the tubes of the uterus, in resemblance of the horns of the same organ in some of the lower animals, sometimes appear as prolongations of the uterine cavity; and if we suppose that this congenite condition has in occasional instances continued to mature age, as will be proved hereafter, we may equally believe in the possibility of the tube in some cases lodging a part of the ovum during pregnancy, and thus constituting the variety under consideration. The prolific intellect of Dezeimeris caused the preceding to procreate the variety *utero-tubo-abdominale*; for, as we shall be led to remark in the sequel, cases are brought forward to establish this variety, which in reality belong, and must be referred, to the last division. In illustration of the present variety, examples are related in which there cannot be a doubt that the ovum had originally been lodged, partly in the tube and partly in the uterus, and in which, at some subsequent period, in consequence of a breach in the tube, the foetus had escaped into the peritoneal sac, while the organic relations of its placenta had been very little, if at all, injured. The nature of the variety *abdominale* has already been ex-

plained ; but the *primitive* will hereafter be more particularly noticed under another head ; and in respect to the *secondary abdominal*, as such cases are widely different from those which are avowedly the objects of this Memoir, they will not be considered here. In regard to the arrangement of Dezeimeris, I have only farther to observe, that, in the exuberance of his ingenuity, he might have added the following with as much propriety, almost, as some of those that have been noticed, viz., *ovario-colique*, *ovario-rectale*, *tubo-rectale*, and *vesicale*, since the remains of an extra-uterine foetus have been found in all these situations.

M. G.-St.-Hilaire admits but two varieties of extra-uterine gestation ; *first*, that which results from laceration of the uterus, and the consequent ejection of its contents into the peritoneal sac ; and, *secondly*, the tubal variety, in which he thinks that when any obstacle obstructs the transit of the ovum along the tube, this canal takes on an inverted action,¹ and forces the product of conception into the abdominal cavity. Dr. Allen Thomson, too, seems to believe in the retrograde motion of the ovum.² Whether such a supposition be correct or not, it would be idle to inquire, since we are never likely to be afforded even analogical proof.

The following division of the subject may be considered as unobjectionable as any that have been offered, viz., Ovarian, Ovario-tubal, Tubal, and Tubo-uterine. These terms, however, are merely relative, and intended, not to imply that fœcundation is performed in a different organ, or happens differently in those cases to what takes place in natural gestations, but to particularize the different situations in which the product of conception may be arrested in its progressive advancement towards the uterus. Or, in other words, we are simply to understand by these terms, that fœcundation has taken place as in ordinary cases, and that some cause has led to the detention of the product of conception within the ovarium, or in connexion with this organ ; *secondly*, that while in the fore-

¹ Repert. Gener. d'Anat. et de Physiol. Pathol. &c., vol. i. p. 47.

² Cycloped. of Anat. and Physiol. part xiii. p. 456.

going position, and the fimbriæ of the tube have been extended upon the surface of the ovary, the ovum has also formed a connexion with the tube, and thus a foundation has been laid for the ovario-tubal variety; *thirdly*, that the ovulum has entered this tube, but has been arrested at some point betwixt its fimbriated and uterine extremities, and constitutes the tubal variety; and, *fourthly*, that from the tube, in occasional instances, having been apparently but a mere prolongation of the uterine cavity, and, in common with the uterus, contained the ovum, the tubo-uterine variety has been formed.

Ovarian gestations have always been considered rare, and in our own day, their reality has even been denied; but it will be seen in the sequel, that neither of these opinions are well founded. The comparative frequency of the ovario-tubal cannot confidently be determined, since in examples of this variety of protracted retention, it might be impossible to decide the original organic relations of the ovum; or since, indeed, from the numerous connexions consequent on its long detention, we might be disposed to refer to this variety, a case which, at an early stage of the gestation, had no connexion except with one of these organs. The tubal variety may safely be considered the most numerous of the whole. We may with equal certainty state, that the tubo-uterine is the least frequent, as there are only a few such cases known.



OVARIAN GESTATION.

Cases of this variety are not so rare, I apprehend, as they were at one time supposed to be; and though illustrations have been described by men whose names stand deservedly high as anatomists and pathologists, yet the reality of such pregnancies has recently been called in question. M. Velpeau, aided by MM. Blainville and Serres, examined four productions which were supposed to be of this nature; and in three of the number, they easily ascertained that the ovary was not involved; but in the fourth they experienced not a little difficulty in determining the product of conception, which did not exceed in size that of a flea, to be placed, not in the substance, but in a cyst between the peritoneal and proper tunic of the ovary.¹

Admitting, as M. Velpeau was assisted by two respectable members of the profession, that the parts in question had been investigated with the utmost diligence, and that the result had been communicated with a greater regard for accuracy than his researches into the structure of the ovum, a most essential point, however, to be held in view is, that his observations are extremely limited, compared to those which have been recorded in support of the reality of ovarian gestations, not merely at a period when the importance of pathology was not so fully appreciated and so correctly cultivated as it has been for some time past, but also in the present day, when the members of the profession seem to vie with each other for its improvement. M. Velpeau, and such as embrace his view of the subject, lay great stress on the circumstance of the Graafian vesicle bursting, and its contents escaping from the ovary sooner or later, after fruitful coition. But although it be thought that the ovum cannot, on this account, continue in the ovarium after impregnation, yet no one will attempt to deny that both of them have in many instances been found in very intimate connexion; and this being the fact, is there any

¹ *Trait. Element. de l'Art des Accouch.* vol. i. p. 196.

reason why the same pathological change which unites these two bodies, may not also lead to the detention of the ovum in the substance of the ovary, where the Graafian vesicles are imbedded, and not between the tunics of the organ. I am quite prepared to admit, that when the product of conception is detained in, or is merely in close connection with the ovary, and the structure of the latter is consequently much altered by the changes that have been induced, that it may be difficult, or, indeed, impossible, to unfold the tissues which are implicated.

Dr. Allen Thomson, whose investigations have contributed much to enrich our information on the subjects of conception and ovology, and who entertains the same views regarding ovarian gestation as M. Velpeau, observes, that the ovum is not likely to be developed in the ovary, since, on the bursting of the Graafian vesicle, its contents escape either into the Fallopian tube, or into the peritoneal sac.¹ To this statement we may say, *first*, that it seems more natural for the ovum to unite with the substance, than with the tunics of the ovary;² *secondly*, that men of whose anatomical knowledge and industry scarcely a doubt can be entertained, have satisfied themselves of the reality of ovarian gestations; *thirdly*, that the weight of authority is in favour of the possibility of the ovum being occasionally developed in the ovary, and the facts in support of such gestations, very numerous; and, *finally*, that if we advert to the natural structure of the ovary, the occasional detention of the ovum in this organ need excite little surprise,

¹ Cycloped. Anat. and Physiol. part xiii. p. 456. Feb. 1838.

² The internal surface of this cyst was smooth and polished, its external firmly adherent to the substance of the ovary; a third of the ovum was closely united to the cyst; Trans. Coll. of Phys. Lond. vol. vi. p. 414. In a young woman, aged twenty, with a perfect hymen, one of the ovaries was found to contain an ovum, of which the chorion was already formed; and the ovum, by means of it, contracted a slight adhesion to the inner surface of the corpus luteum; Sir Everard Home, Phil. Trans. vol. cxix. p. 61. In 110th volume, same work, it is stated in another case, that the most careful dissection of the parts satisfactorily proved the tumour to be covered, not by the peritoneum, but by the coats of the ovary itself, in proof of which, fragments of the corpus luteum were seen upon the coats of the ovum.

it being impossible wholly to separate its proper tunic from the substance of the ovary in which the Graafian vesicles are imbedded.¹ Dr. Thomson, indeed, admits that the ovum may be organically connected to the ovary or parts in its vicinity.² Dezeimeris, who, in his excellent memoir, affords proofs of having read most extensively on, and very critically studied the whole subject of extra-uterine gestation, is satisfied of the occurrence of ovarian pregnancies; and I cannot help thinking, that if the respectability of the authorities by whom some of those cases have been communicated, and the accuracy with which many of them have been examined and detailed, be dispassionately considered, the reality of such pregnancies will be admitted, even by those who are now sceptical.

Dr. de S. Maurice's case, communicated by the Abbé de la Roque, is the earliest of which I can find a circumstantial detail. It occurred in April 1682, to a lady, who had been safely delivered in eight previous births, and was in the fifth month of her ninth pregnancy. After rising early in the morning in perfect health, and writing for about an hour, she was suddenly seized with faintings, followed by general prostration, pallid countenance, clammy perspiration, and violent pains in the abdomen, resembling colic, extending from the right groin to the kidneys; and after expressing her belief that she was delivered, she died in the arms of the medical attendant. Her last confinement happened about five years previous to this event; and until five months before her decease, the catamenia had always been regular; they then, however, ceased for three months, and she considered herself pregnant; but as there was a slight discharge per vaginam in the fourth and fifth, she abandoned this idea. On dissection, there was found in the abdominal cavity a large quantity of blood, and in it an embryo the size of a chicken. In the centre laterally, the right ovary was lacerated throughout

¹ Une membrane propre envelope le tissue de l'ovaire, et est tellement unie à lui, qu'il est impossible de l'en séparer entièrement, quels que soient les moyens que l'on mette en usage; Coste sur l'Embryogénie, vol. i. p. 66.

² Cyclop. Anat. Physiol. loco jam citato.

its whole length; but neither of the tubes nor the left ovary were in the least degree implicated. The injured ovary is described as equalling the volume of a hen's egg; and the left, that of a small chesnut.¹ The minuteness with which the foregoing case is detailed, must inspire the reader with no little confidence in the reality of such gestations; and, although, with the exception of the laceration, the writer does not particularize the condition of the injured textures so critically as would have been done by a modern pathologist, yet the state of the other uterine appendages did not escape his attention. A most important feature in the detail, in as far as it proves the dissection to have been conducted with attention, and tends to corroborate that the gestation was ovarian, is the fact that the right tube was not involved.

The next example to be noticed is one which occurred in 1697. In February of this year, the patient, aged thirty, was safely delivered of her first child; and after a fever from exposure to cold, and a mammary abscess, she conceived a second time; but from there being a discharge per vaginam, she did not suspect pregnancy. Eight days before her decease, she was seized with extreme debility, a cadaverous appearance of countenance, coldness of the limbs, suspension of the pulse, and cold perspiration. She recovered after appropriate remedies; but on the 6th July she was attacked with violent vomiting, succeeded by extreme debility, and in six hours she died. In the lower part of the abdomen, a quantity of blood, partly fluid and partly coagulated, with an embryo of two months, were found. The right ovary was lacerated opposite the fimbriæ of the corresponding tube; but neither the uterus nor its other appendages presented anything remarkable. The right ovary was six times the size of the left, and contained a fungous vascular mass, supposed to be the placenta.²

No person open to conviction can call in question the reality of the following case. The patient was an unmarried woman of thirty-eight, who, for twenty years, had practised

¹ Phil. Trans. vol. ii. p. 650.

² Marget. Thesaur. Anat. vol. ii. p. 141.

her avocations as a Cyprian, and unexpectedly conceived. When about a month pregnant, she was seized with general languor, nausea, vomiting, faintings, spasmodic affections, and almost constant pains in the joints. In the third month, a hard tumour was felt externally, which gradually increased in size, and extended to the left side of the hypogastric region; the ailments incident to pregnancy were unusually severe. There was difficult micturition, which was aggravated by some emmenagogue medicine that had been repeatedly taken, perhaps with the intention of inducing abortion. An acrid discharge which flowed per vaginam, excoriated the parts, excited irritation and straining efforts, a sense of pressure, severe pain in the lower part of the abdomen, sacrum, left lumbar and iliac regions, with tormina, as if there was a disposition to uterine action. With these sufferings, the pain in the tumour returned, accompanied by inflammatory fever, followed a few hours before death by tumefaction of the abdomen, which, with convulsions, terminated her existence on the ninth day. Besides unequivocal evidences of inflammation, and a laceration of the left ovary, a quantity of blood was effused into the abdominal cavity. The writer minutely describes the peritoneal and proper coat of the organ in which the foetus was contained until the fourth month, when the right foot passed through the cyst, and the patient was destroyed by the consequent hæmorrhage. The case is accompanied by a plate, to illustrate the appearances of the lacerated organ. The subjoined quotation from the original must satisfy the reader that the points involved in the foregoing case were minutely examined.¹

The next case occurred under very extraordinary circum-

¹ Quo autem nexus tubarum et ovariorum, tam inter se quam cum utero, eo melius pateret, membranam uteri externam, una cum latis expansionibus ligamentisque rotundis separavimus, atque ad intuendam exteriorem et interiorem ovarii impregnati structuram, imprimis ejusdem exteriorem atque communem tunicam, in duas lamellas mediante sutili tela cellulosa, vel sibi invicem, vel cum substantia externa fibrosa cohærentes, separabilem ex parte disjuximus, postea ovarium ipsum a loco rupturæ ad partem usque superiorem incidimus. Exterior illius textura fibrosa erat; interior instar uteri sinuosa et fibroso-vasculosa, diversimode crassa, circa locum placentæ crassissima, et in tota circum-

stances, in a strong healthy woman of thirty, who was executed for the murder of her child, January 16, 1735. It was ascertained that she had catamenia on the 1st of the same month, and thereafter sexual intercourse with one of her fellow-prisoners. On dissection, both the Fallopian tubes were found greatly distended; the left of a pale colour; the surface of the right inflamed. From the left tube a white oval body, the size of a large garden pea, with some white viscid matter, was forced out by pressure. The left ovary was more than twice the size of the right, and presented the appearance of a sac of dark brown-coloured fluid; but when permitted to escape, it was transparent and viscid, and the interior of the cyst was reddish and of the consistence of the crystalline humour.¹

The next case is accompanied by several corroborating circumstances. It occurred in a woman of colour, between thirty and forty years of age, in the State of Virginia. For eighteen months previous to her decease, she had a tumour in the right iliac region, which was attended by occasional paroxysms of very acute pain, with troublesome diarrhoea. Fœtal movement was felt about the usual period. On dissection, the right ovarium was observed to be of a dark blue, verging towards an ash colour, appended to its ligament, and adhering to the colon, mesocolon, ileum, and mesentery. The

¹ Med. Essays, Edinburgh, vol. v. p. 277.

ferentia membrana tenui villosa obducta; Bœhmeri, *Observ. Anatom. Rar. Fascic. I.* Halæ Magdeburgicæ, 1752.

The following works and abstracts of cases may be consulted on the subject of ovarian gestation, viz., *Ephemerid German.* append. Dec. 1, an. 4 and 5. Lipsiæ, 1673. Right ovary enlarged to the size of a duck's egg by the ovum; *Mem. de l'Acad. Roy. des Scien.* 1701, p. 143. Patient aged twenty-six, first child, ovum in left ovary; *Journ. de Med. Chir. et Pharm. &c.* 1768.

A. T., aged thirty, aborted in April 1787, when ten weeks pregnant; continued sickly, but conceived again in the beginning of 1790; catamenia suppressed; complained of painful micturition, constipation, a sense of weight, pain, bearing down, and fulness, more especially towards the left side of the abdomen; *cervix uteri could not be reached*, whereupon retroversion was suspected; died August 30, 1790, at the Middlesex Hospital; uterus somewhat enlarged, and lined with decidua; *extremity of left tube lost in the cyst, and not a vestige of the corresponding ovary could be traced*, but on the right side the uterine appendages

cyst contained purulent matter, and the bones of a foetus of the fourth month; the left ovarium and the uterus were perfectly sound. Dr. Bland, who preserved the parts, afterwards exhibited them to many of his brethren, who were unanimous that the case was one of ovarian gestation.¹

The accuracy of the following most remarkable case cannot be called in question, as the examination of the body was conducted by the officers of a public hospital. Louise Adelaide, aged thirteen, when five years old, became an inmate of Salpêtrière, where, according to her own confession, "*Elle avoit contracté l'habitude de se livrer à la masturbation, dont sa maitresse l'avoit plusieurs fois surpris. Elle n'avoit jamais ses regles.*" In a state of extreme emaciation she entered the Hôtel Dieu. "*Les mamelles n'étoient nullement développées; le pénis n'étoit pas encore garni de poils; les grandes lèvres sembloient ne pas exister, mais le clitoris étoit très développé; la membrane-hymen existoit dans son intégrité et permettoit-à-peine l'introduction du petit doigt dans le vagin.*" On opening the abdomen, the viscera were found adhering to each other, and to the anterior parieties of the cavity; in the lower part, and to the left side of which a round pouch was discovered, pierced anteriorly, and containing hair, the remains of some teeth, a portion of the jaw, cartilages, long and flat bones, with some greasy matter. The tumour occupied the situation of the left ovary, no trace of which could be discovered.

¹ Edin. Med. Comment. vol. xi. p. 334. 1786.

were distinct; the cyst, which was placed between the uterus and rectum, was of a dark colour, thin, and, besides a little fluid, contained a female foetus of seven months: As the left ovary could not be traced, the writer inferred that the pregnancy was ovarian: of the accuracy of the dissection, as it was conducted in a public and metropolitan hospital, no doubt can be entertained; H. Krohn, London, 1791.

The mother of several children felt differently in her last to what she did in any of her former gestations; and towards its close, when examined *per vaginam*, *nullam ad partum in uterino ore dispositionem, nullam præparationem nullaque signa partus*: When eleven months pregnant the woman died, and in her abdomen were found eight pounds of blood, besides a foetus, whose funis entered a tumour formed by the left ovary; Deutsch. Halæ, 1792. In a female, aged thirty-eight, right ovary contained a foetus of seven months; Recueil des Actes de la Soc. de Santé de Lyon, 1798. Skeleton of a foetus fifteen inches long,

The left tube, which was extended upon the surface of the cyst, was healthy; as was also the uterus, which was small, and in its natural situation; the right ovary was covered with tubercles, but the condition of the corresponding tube is not particularized.¹

The following, though the dissection was performed by a professor of anatomy, is one of the cases of which M. Velpeau denies the reality. It occurred at Lille, in an unmarried female, aged thirty-two, who died in March 1756, suffering under fixed pain in the left iliac region. The body was examined in the presence of two medical officers of the military service, by Professor Varocquier. "Ils n'apperçurent rien à l'extérieur; intérieurement il-y-avoit une légère inflammation à la circonférence des gros intestins; mais ce qui attira l'attention des observateurs, fut l'ovaire gauche: il étoit de la grosseur et de la figure d'un œuf de poule, et la trompe du même côté faisoit une légère saillie de bas en haut et dehors en dedans; son pavillon étoit étendu et appliqué à la face externe de l'ovaire avec lequel il avoit contracté une adhérence. M. Varocquier ayant ouvert cet ovaire, il en sortit environ une once d'une liqueur lymphatique semblable à du petit lait, et il-y-trouva un fœtus un peu flétri, avec le placenta et un cordon ombilical bien formé, ayant un pouce et demi de long, et quelques lignes de circonférence. Le placenta étoit attaché au haut de la substance de l'ovaire, avec lequel il étoit

¹ Journ. de Med. Chir. Pharm. &c. vol. v. p. 144.

in the right ovary; Med. Annals, Ed. vol. iii. p. 379. Ovum in left ovary; Journ. de Med. Chir. et Pharm. &c., vol. xxxix. p. 324. Case of contemporaneous *intra* and *extra uterine* gestations in a married woman of thirty-three: for two years previously she was in a state of delicate health, conceived thereafter, and was in due time delivered of a living child; eleven days afterwards she died, and the left ovary was found to contain teeth, bones, and tufts of hair; Med. Chir. Rev. vol. ix. p. 267, copied from the Philadelphia Journal of Medicine and Surgery. In the museum of St. George's Hospital, London, is a preparation which exhibits an ovum in the left ovary, at an early stage of gestation; it was procured many years ago by Sir C. Mansfield Clarke, Bart., from the body of an unmarried female, who acknowledged herself to be pregnant, and died from a natural cause; Dr. Granville's Graphic Illustrations, &c. Recueil des Act. de la Soc. du Lyon, vol. xiii. p. 63. In Med. and Phys. Journ. Lond. vol. xxviii. p. 516, copied from Journ. de Paris, Nov. 1812,

confondu ; le fœtus avoit deux pouces de long depuis le sommet de la tête jusqu'aux genoux ; le reste des extrémités inférieures qui étoit flétri, n'avoit que deux lignes de longueur ; les cuisses étoient couchées et même collées le long du ventre, les bras étoient aussi collés le long du thorax ayant quatre à cinq lignes de longueur depuis l'épaule jusqu' au coude, et le reste des extrémités supérieures n'avoit qu'environ deux lignes de longueur. Les membranes qui formoient la tumeur avoient une demi-ligne d'épaisseur, la matrice s'inclinoit un peu de ce côté-la, et elle étoit dans son état naturel, ainsi que l'ovaire du côté opposé. L'hymen étoit entier."

The subject of the next case was a woman of colour, aged about forty, and the mother of six children, the last of whom was eight years old. This woman died of chest disease, in which cavity were found adhesions, an abscess in the left lung, and considerable effusion into the pericardium. The abdominal viscera, except the liver and pancreas, were healthy ; the large lobe of the former was much increased in size, as was also the latter organ, which weighed three pounds. The vesicula fellis was much distended with viscid bile. In the pelvis the uterus was pushed against the pubis, unusually small and indurated. The left ovary, which was considerably larger than the right, equalled the size of a squirrel's head, and lay among the intestines, to which it slightly adhered ; the right organ, which was placed higher,

¹ Hist. de l'Acad. Roy. des Sci. An. 1756, p. 56.

is the case of a woman aged twenty-six, from whose left ovary a full-grown fœtus was extracted. A fœtus of five months contained in the left ovary of a woman aged thirty-eight ; Med. Repos. Lond. vol. xix.

Three cases of ovarian pregnancy are related in the Glasgow Medical Journal, vol. iii. p. 153 ; the first was a married woman, aged thirty, who, from the 20th May 1823, until the 3d September following, the period of her decease, independently of the ailments incidental to pregnancy, suffered from a variety of characteristic complaints, such as lancinating pains in the hypogastric region, extending to the left groin, attended by uneasiness on pressure, difficult micturition, tenesmus, diarrhœa, and for three or four days a sanguineous discharge, *per vaginam* ; she had also severe and incessant shivering, and a pectoral complaint. On dissection there was found in the situation of the *left ovary*, a round soft blueish tumour, the size of a goose egg, connected to the uterus, Fallopian tube, and rectum, by strong adhesions. An opening into this tumour gave exit to

was of an oblong, irregular form, and adhered to the intestines, peritoneum, &c. To examine these organs the more minutely, they were removed from the body, and carried to the house of the operator, where, the following day, they were minutely investigated. The right was first dissected by the successive detachment of its investing membranes; when the internal one was divided, a small quantity of yellow fluid escaped, and an embryo of three or four inches in length, well formed, and furnished with a funis which passed into a fleshy vascular mass, three or four times the size of the embryo. Though the foetus was but small, its bones were hard and fully ossified. In removing the peritoneal tunic from the left ovary, and passing the knife into the body of the organ, the instrument came into contact with a hard substance, which led to a more cautious dissection, when a foetus eight inches in length was exposed, whose funis, instead of originating from the umbilicus, issued from the anus, to join a smaller but more healthy placenta than that of the foetus in the right ovary. The foetus in the left ovary was that of a male; but the sex of that in the right could not be distinguished.¹

The following case, in so far as anatomical accuracy is concerned, ought to satisfy those who are still sceptical regarding the reality of ovarian gestation, since the dissection was performed by Mr. Stanley, then [demonstrator of anatomy, and one of the surgeons to St. Bartholomew's Hospital. The

¹ Journ. de Med. Chir. &c., par Corvissart, &c., vol. xxvi. p. 23, 1813, copied from New York Repos. &c. ex. 3, vol. i. 1810.

about four ounces of dark coloured foetid fluid, and some bones, which were at once recognised for those of a foetus. The portion of the tumour next the uterus was incrassated and semi-cartilaginous; the right ovary exhibited the same degenerations of structure, and was enlarged; the uterus was twice its ungravid size, and lined with decidua; and the left tube was thickened, and its calibre enlarged.

The second patient was the mother of four children, and was visited on the 1st March, three months prior to which she had had with a neighbour a violent altercation, which ended in blows, to which, or to her being obliged to carry coals, she ascribed her complaints. She considered herself three months pregnant, but the abdomen was more tumid than usual at this period of gestation, and tender to the touch; there were rigors, thirst, and threatenings of syncope. Appropriate remedies procured temporary relief, but on the 13th her

subject of this case, aged thirty, was found in a state of insensibility, with livid countenance, subdued muscular power, quick feeble pulse, and contracted pupils, in consequence of having taken tincture of opium with the intention of self-destruction; but neither the quantity could be ascertained, nor the period determined which had elapsed before medical aid was procured. No motive for the rash act could be discovered, except the occurrence of impregnation from illicit intercourse. Autopsy exhibited remarkable distension of the blood-vessels ramified on the broad ligaments, with unusual vascularity of these appendages. The uterus was larger than the ungravid organ; its convexities, both anteriorly and posteriorly, were increased, which gave to its body somewhat of a globular form; its substance was spongy, except in the cervix, which was of firmer texture. A decidua, nearly half an inch in thickness, soft and pulpy, and of a yellowish white appearance, lined the interior of the *corpus uteri*. The cervix of the organ was filled with gelatinous matter, but not sealed up: the Fallopian tubes were enlarged, remarkably tortuous, and from their fimbriae to within an inch of their uterine termination, the inner surface displayed numerous loose folds, formed by the lining membrane. On the posterior part of the left ovary, which was considerably larger than the right, was a

complaints returned with increased severity, accompanied by insupportable tenderness, and difficult micturition. A vaginal examination detected a tumour which filled the pelvic cavity; and the os uteri was felt with difficulty behind the os pubis. The case was now considered one of retroversio uteri, and its reposition attempted. After lingering several weeks the patient died. On dissection the omentum was found thickened, and of a peculiar blueish-grey colour; and the intestines exhibited the same appearance. There was a profuse quantity of grumous blood in the abdomen, and in it a foetus between the third and fourth month. Decidua lined the uterus, which was the size of a large orange; the left ovary was discovered to have contained the foetus.

The circumstances of the third patient are but very superficially narrated. At the commencement the woman was under the care of a female practitioner, who called a surgeon; and soon thereafter, death ensued. This individual had given birth to several children previously. Blood in profuse quantity was found in the abdominal cavity; and the uterus was increased in size, and lined with decidua. The left ovary was much enlarged; a small placenta adhered to it, and a foetus of the fifth or sixth month was found within the membranes.

rounded prominence distinct from the general fulness. The tunics of the ovary at this point were numerous furnished with tortuous blood-vessels; and from a careful examination, it was clear that there had not been any aperture in the external membrane: its surface was perfectly smooth. On dividing the membrane which covered this prominence, a distinct cyst was exposed, *which contained an ovum*: the internal surface of this cyst was smooth and polished, its external *firmly adherent to the substance of the ovary*. The ovum was simply in contact with the cyst in two-thirds of its circumference; in the remaining third, it was united to it so closely as to be inseparable. The chorion and amnion were perfectly distinct, and by the aid of a magnifying glass, vessels filled with blood were seen ramifying on the former. A yellowish honey-like matter filled the amnion, but the embryo could not be distinguished. Around the ovum for some distance the ovary was loaded with blood effused into its substance. The section of the right ovary exposed numerous Graafian vesicles, and one large cyst adequate to the reception of a horse bean, filled with watery fluid, and with fleshy excrescences which originated from its internal surface.¹

The next case occurred in the practice of Dr. Granville; the dissection of the parts, and a drawing of them, were exe-

¹ Transac. Lond. Coll. of Physicians, vol. vi. p. 414.

In the Pathological Museum of Wurtzbourg, there are three preparations of ovarian pregnancy; *in one of which* the ovary has been laid open to exhibit its contained fœtus, which would seem to be in the early half of the second month of its development. The ovary is bulky, and its parietes thickened; more especially where the placenta is adherent. The *second*, from the size of the fœtus, is thought to be in the latter half of the second month: the organ is more bulky, and its parietes thicker than those of the preceding specimen. In neither of these is it specified by the writer, whether it be the right or left ovary which contains the embryo. In the *third* preparation the left ovary envelopes the fœtus. The organ is three inches in length, and two in diameter, fibrous externally, and very vascular internally; its parietes are incrassated, especially where the placenta is adherent, at which point their texture exhibits a spongy appearance. A female fœtus of three months is contained in this organ. The uterus is enlarged and lined with decidua. It is proper to remark, that Hesselbach, who has furnished the foregoing descriptions, is one of the most distinguished anatomists in Germany.

cuted under the joint directions of Sir Everard Home and Mr. Bauer. The subject of this case was a lady, aged thirty-nine, the mother of seven children. Until December 1818, when she conceived, the catamenia were regular; and from this period till 9th June 1829, the time of her decease, she experienced various and severe sufferings; and there were occasional discharges of a colourless fluid *per vaginam*. After death a considerable tumour, soft and moveable, was perceived immediately above the pubes, and rather to the left of the *linea alba*. On reflecting the abdominal parietes, blood, to the amount of several pounds, was observed to fill every space which the viscera did not occupy. The tumour alluded to was about four times the size of a hen's egg; and displayed the same general black-reddish hue of all the ambient parts. A blood-vessel the size of a large crow-quill, which penetrated the dense portion of the tumour, was traced upwards to the descending aorta, and was ascertained to be a branch of the left spermatic. A smaller and much shorter vessel, arising from the tumour, was also found to communicate with the spermatic vein; thus establishing a complete circulation to and from the parts. The inferior and left half of the tumour presented a surface consisting, at two or three points, of diaphanous membranes, through which a foetus of about four

Barkhausen of Bremen, published a case, in which a well-developed foetus, but which had been some time dead, was found in a cyst, which the most minute examination proved to be the right ovary. The parietes of the cyst, which were very thick, distinctly displayed muscular fibres towards that side from which the ovary receives its ligament. The right tube and corresponding ligaments adhered to the cyst; and the uterus was neither enlarged nor lined with decidua.

Walter's Anatomical Museum at Berlin contains a preparation of the right ovary, in which there is an embryo: the uterus is the size of one two months pregnant.

In the Anatomical Museum at Strasburg, there is a preparation of an ovary containing a dried embryo.

Rust's Magazine for 1828 contains an example of ovarian gestation: the right organ lodged a foetus of about three months' growth, and the left was diseased.

Duverney, in his Anatomical Works, relates that, in a woman who died suffering from pains resembling those of labour, he found an effusion of blood in the abdominal cavity, and an embryo which had burst from the right ovary, whose cavity was filled with blood.

months' growth was readily discovered. The left ovarium was the seat of the tumour, which, as it gradually enlarged, distended the tunics of that organ in the same progressive manner, in a ratio with its own size. As the fœtus, however, increased further, the ovarium burst in three places; and thus the membranous sac forming the tumour, partially protruded into the abdominal cavity. During this destructive process, that part of the parietes of the ovarium to which the placenta was attached was also lacerated, so as to tear the adhesions of the mass, thereby producing sudden and fatal hæmorrhage. From thickening of its parietes, the uterus was nearly as large as it would have been at the same period of natural pregnancy, and its orifice was closed. The right ovary was healthy. Both the Fallopian tubes were pervious only from their fimbriated extremity inwards to about half their length. The most careful dissection of the parts satisfactorily proved that the tumour was covered, not by the peritoneum, but by the coats of the ovary itself, in proof of which, fragments of the *corpus luteum* were seen upon the coats of the ovum.¹ From the adhesion of the membranes of the ovum to the *corpus luteum*, Sir Everard Home inferred, that some inflammatory action had supervened and led to the detention of the ovum in the ovarium.

¹ Phil. Trans. vol. cxi. p. 107.

In the Bibliothèque Medicale, vol. xxxviii. p. 265, Professor Ucelli of Pisa, relates the case of a woman, aged thirty-four, the mother of three children, who, a fourth time, exhibited all the signs of gestation, such as suppression of the menses, impaired appetite, nausea, vomiting, engorgement of the mammæ, and ultimately tumidity of the abdomen. Very soon, however, these phenomena were succeeded by general languor, extreme weakness, which often amounted to syncope, and pain, constantly increasing, to the right side of the hypogastric region. Towards the close of the third month, something resembling a mole, the size of a hen's egg, was extruded from the vagina; but this evacuation afforded no relief: Scarcely six days had elapsed after the expulsion of this body, when the hypogastric pain became intolerable, accompanied by horrid vomiting. Fearful depression of the vital powers supervened; the patient was deprived of vision and speech, and death put a period to her existence. On opening the abdominal cavity, a small male fœtus, well developed in all its parts, was found in the right iliac fossa, attached to the ovary of that side by an umbilical cord. This ovary, which had formed a tumour very like a goose egg, exhibited an

The body of evidence in favour of ovarian gestation, contained in the foregoing cases, is such as ought to satisfy every one who is not determined to falsify the evidence of his own senses. It is difficult, therefore, to conceive upon what grounds M. Velpeau continues sceptical on a point which is admitted by men who have attained the highest rank in the profession. As it is very unlikely that a man of his industry can be unacquainted with what has been recorded on this subject, is it possible that he shuts his eyes against facts, and that his opposition is dictated, not entirely by a desire to gloss all his sayings and doings with the appearance of originality, but by a mere spirit of contention? The extent to which this latter disposition has sometimes been manifested, is almost inconceivable, and reminds me of an individual of whom I have heard, who, when on a public trial before a learned body, declared, that a thing might be hard and soft at the same moment. If M. Velpeau pretends that the implicated structures have not been examined with sufficient accuracy, such a charge, even if it were applicable to a considerable proportion of the cases, which it unquestionably is not, comes with very bad grace from one who, though he may be profoundly versed in comparative anatomy, has however betrayed that his knowledge of human anatomy is not of the most correct description, since he stands accused of having been guilty of "*une foule de contradictions choquantes*."¹

¹ Coste sur l' Embryogenie, vol. i.

aperture inferiorly, through which the embryo had escaped. The left ovary and tube preserved their natural condition; the structures composing the uterus were much thickened, and the cavity of the organ so much dilated, that it could easily have contained a foetus the size of that which was found in the abdominal cavity; Journ. des Connais. Med. Chir. Février, 1837, p. 4.

A woman six months pregnant, had pains resembling those of labour, with a sense of pricking in the side, where a foetus was afterwards discovered. These complaints continued about a fortnight, when she died. A foetus of six months' growth was found in the ovarium, which was burst, and was followed by hæmorrhage. The uterus was the size of a fist, and contained decidua; Buru's Principles, edit. 9th, p. 232. Rapport. Soc. Philomat., vol. i. p. 146; foetus of four months' growth.

OVARIO-TUBAL GESTATION.

To this division, those cases are to be referred in which the ovary and tube are connected with, or actually constitute a part of the cyst which contains the ovum. After its fecundation, the ovulum, or its capsule, owing to some morbid change, instead of being detached from, preserves its organic relations, or forms a preternatural connexion with the ovary; and the fimbriæ of the tube, after their expansion upon the ovary, influenced by the same pathological change, contract a preternaturally firm union with it, and thus a foundation is laid for the present variety of misplaced pregnancy. In some instances, it may be presumed that in the incipient stages of the gestation the ovulum is connected with only one of these appendages, either the ovary or the tube; and that the second organ, whether ovary or tube, becomes involved merely in consequence of its state of activity, its progressive enlargement, and the pressure exerted by the ovum, together with the consequent morbid excitement. I apprehend that the foregoing explanation will account for the origin of those cases which have been recorded as examples of abdominal extra-uterine pregnancy, and to which M. Dezeimeris has prefixed the adjective *primary*, in contradistinction to those gestations in which the foetus has burst from its original cyst into the peritoneal sac. In support of the foregoing opinion, I appeal to the dissections, in a great proportion of which we are informed, *first*, that no trace of one of the ovaries could be discovered; ¹ *secondly*, that one tube only was ex-

¹ Not a vestige of the left ovary could be traced; Krohn, London, 1791. Med. Journ. Glasgow, vol. iii. p. 153. No trace of the left ovary could be discovered; Journ. de Med. Chir. Pharm. &c., vol. v. p. 144. The ovary was obliterated; Recueil Soc. de Med. de Paris, vol. xiii. p. 63. Not a vestige of the left ovary could be traced; Med. Ann. Ed. vols. ii. and iv. Mad. La Chapelle, Prat. Accouch. vol. iii. p. 152. The left ovary could not be found; Med. and Surg. Journ. Ed. vol. xlii. p. 353. Left ovary could not be discovered; Bonnie. The right ovary could not be found; Med. Phys. Journ. Lond. vol. lix. p. 337.

tended upon, or, terminated in the foetal cyst; ¹ or *thirdly*, that both one tube and an ovary were incorporated with the envelope of the foetus.² In some instances, it is said that the placenta was found cohering to the colon, the spine, the liver, or even to the stomach.³ If in those examples we had satisfactory evidence of the dissection having been conducted with accuracy, and it had thence been determined that the mass had no connection whatever with a tube or an ovary, we should then be justified in admitting the reality of abdominal gestation, or of one in which the ovum, from the moment of its separation from the ovary, had no connexion either with this organ or with a tube, and had consequently escaped into, and was developed in the peritoneal cavity. But as, in the first place, we are not informed whether in those cases the placenta cohered to a tube or to an ovary; and, secondly, as in some other illustrations it is evident that the cyst of the foetus was viewed as the mass, those dissections cannot be considered accurate. It is proper to observe, however, that the placenta has in occasional instances been found developed to such an incredible size,⁴ and expanded to such an incon-

¹ Hist. Acad. Roy. des Sci. 1748, p. 73. Phil. Trans. vols. iv. and ix. Trans. for the Improv. of Med. Chir. Knowl. vol. ii. p. 1. Comment. de Rebus, vol. xxxv. p. 289. Recueil Period. vol. xiii. p. 63. Nuov. Journ. des Med. et Chir. vol. x. p. 500. Journ. Complement. vol. vi. p. 257. Med. Chir. Rev. vol. x. p. 223. Med. Surg. Journ. Ed. vol. xlii. p. 353.

² Phil. Trans. vol. iii. p. 605. Boehmerus, Fas. 2. p. 13. Rust's Magaz. vol. xv. p. 182. Miscel. Curios. Dec. 2, An. 2. p. 447. Gifford's Caus. No. 157. Phil. Trans. vol. iv. p. 365. Act. Lips. 1706, p. 265. Dr. A. Smith's case. Case of Dr. Geo. P. Smith of Leeds. Journ. de Med. Chir. Pharm. vol. xxxix. p. 324. Hist. Acad. Roy. des Sci. 1773, p. 270. Mem. Med. Soc. Lond. vol. iii. p. 184. Med. Annals. vols. ii. and iv. Mr. Messer's case. Evesque's case. Jour. de Med. Chir. et Pharm. vol. xv. p. 51. Nuov. Journ. de Med. vols. ii. and iii. pp. 320 and 288. Madame La Chapelle Prat. Accouch. vol. iii. pp. 147 and 152. Med. Chir. Rev. Lond. vol. i. p. 299. Bonnie's case. Med. Chir. Rev. vol. vi. p. 618. Med. and Phys. Journ. Lond. vol. lix. Dr. King's case. Journ. Med. Chem Sci. Dublin, vol. ii.

³ Hist. Acad. Roy. des Sci. p. 32, an. 1716. Nuov. Journ. de Med. vol. ii. Med. Observ. and Inquir. vol. iii. Mem. Acad. Roy. Chirurg. vol. iii. Œuvres de Duverney, vol. ii. p. 363. Journ. Complement, vol. vi. p. 259. Mem. Med. Soc. vol. iii. Journ. des Savans, 1678.

⁴ Nuov. Journ. de Med. vol. ii. Med. Observ. and Inquir. Lond. vol. iii. Mem. Med. Soc. Lond. vol. iii. Journ. des Savans, 1678.

ceivable extent,¹ as to form connexions with parts very distant from the uterus and its appendages, which must have caused its original connexions to be overlooked, and thus favoured the notion of ova having been developed in the peritoneal sac, quite unconnected with the organs naturally destined to receive it.

If the product of conception, after its complete separation from the ovary, instead of being embraced by the fimbriæ of the Fallopian tube, were to escape among the abdominal viscera, it is very questionable whether its development would continue to advance. It seems more consonant with the established principles of physiology and the facts of pathology, to assume that the germ, under such circumstances, would be blighted. Some years ago, Professor Dubois² doubted the reality of abdominal gestations, as did also Dr. Merriman and the late Dr. Clarke; and both of these latter gentlemen, upon the same principle, viz., the impossibility of the ovulum cohering to the abdominal viscera, owing to these organs being in perpetual motion.³ The development of the ovum in the abdominal cavity may be objected to, not upon the principle assumed by Drs. Merriman and Clarke, which, to say the least, is rather mechanical; but because, *first*, the peritoneal sac is not the natural residence of the ovulum; and, *secondly*, because, to obtain supplies of nutritious matter for its evolution, it requires to be in contact with a mucous tissue such as is afforded by the tubes and the uterus. The ovaries and Fallopian tubes are organs which, during the incipient stages of generation, have most important functions to perform, as has been well established both by experiments made on the lower animals, and by pathological observations in the female of our own race. That impregnation commences in the ovaries, or that these organs are the seat of conception, and not the uterus, as follows from Dr. Blundell's views, is proved; *first*, by the formation of the *corpus luteum*,

¹ Drs. A. King's and Smith's cases. See also Med. Phys. Journ. Lond. vol. lix.

² Evesque, p. 26. Bonnie, p. 24.

³ Dissertation on Retroversio Uteri, p. 67. Dr. Clarke. Trans. Med. Chir. Know. vol. ii.

in one or other of these organs; *secondly*, by the ovum being occasionally contained, either in the ovary, or in intimate connexion with it; and, *thirdly*, by disease, removal, or absence of these organs, being invariably attended with sterility. That the Fallopian tubes contribute something towards the development of the germ during its transit towards the uterus, is more than probable, since, in the *first* place, ova in various stages of development have often been found in these canals; *secondly*, as imperviousness in these tubes, whether connate, acquired, or the result of experiment, prevents impregnation altogether, or in its early stages suspends or destroys this important function; and, *thirdly*, the curious fact, that unless, during the operation of spaying, the fimbriated extremities of the tubes, as well as the ovaries, be removed, the animal will as regularly be in heat as previously to its mutilation, which shews not only the importance of these organs during the incipient stages of evolution, but that their functions are not yet sufficiently understood.

Dr. Blundell, whose opinions on this subject are justly entitled to attention, thinks that pregnancy by inclusion supports the possibility of an ovum being developed in the peritoneal cavity; but this far-fetched argument is by no means a fair analogy. Although one ovum may readily amalgamate with another when the structures of both are in a gelatinous condition, yet it by no means follows that after their tissues have attained their distinctive characters, they would cohere with the same facility. It is almost unnecessary to remark, that as there is no resemblance betwixt the structure of the chorion and peritoneum, the alleged connexion is still less likely to take place in the adult subject.¹

Numerous illustrations of this variety may be offered. The

¹ "I have myself seen a fœtus, on the whole not imperfectly formed, about the size of six or seven months, and which was taken from the body of a boy, where it lay in a sac, in communication with the child's duodenum, the boy being pregnant. It being, therefore, not impossible for a fœtus to form within the body of a male, in such a situation, too, I cannot accede to the opinion advanced by some, viz., that it is impossible that a fœtus should form in women within the peritoneal sac among the abdominal viscera. The probability is, that this accident is possible, but that it is of very rare occurrence."—*Lancet*, vol. xiv. p. 611.

earliest of which I can find an account in the medical literature of our own language, is one which was recorded by M. Bussiere in 1693. It was discovered in the body of a convict aged twenty-five or twenty-six, who was executed a short time after sexual intercourse with one of her fellow-prisoners. The translation is abridged from the French, and states, that on dissection, about an inch and a half of the fimbriated extremity of the left Fallopian tube was dilated to more than one inch in diameter, and that the portion which was thus dilated, embraced nearly the whole of the ovary, and adhered so firmly to the membrane of this latter organ, that its separation could not be effected without violence. The ovum, which was about the size of a hazel nut, presented itself when the tube was detached from the ovary.¹

¹ Phil. Trans. vol. iii. p. 605, abrid. edit. *The authorities containing the following illustrations may also be consulted regarding the present variety.*

A woman who had several children previously, again conceived in 1658, at the age of thirty; and at the termination of her pregnancy had pains like those of labour, without, however, being followed by any uterine evacuation or reduction in the size of the abdomen. In this condition she continued eighteen months, when, by the advice of a quack, frictions were employed over the abdomen, which were succeeded by the evacuation of foetal bones per rectum, until those of three foetuses were discharged. For two years thereafter she continued well, when, in consequence of riding a jolting horse, she had an inflammatory attack, of which she died, and there was no dissection; Phil. Trans. vol. iv. p. 155.

A woman aged thirty-six, the mother of several children, died after several years' indisposition, and giving birth to a foetus of two months; another ovum, containing an exceedingly small embryo, was found in connection with the right tube and corresponding ovary; Boehmerus, Fas. 2, p. 13.

In a woman who conceived at thirty-eight, and died at the age of sixty-four, a foetus weighing eight lbs. was found in the abdomen, free from decomposition, and with teeth which had attained the development of those of an adult; Phil. Trans. vol. ii. pp. 435—678.

In August 1659, a woman aged sixty fell from a window, and two hours afterwards expired, when an indurated cyst, the size of a foetal head of the fourth month was found in the abdomen, containing a foetus; Bartholinus Cent. 6, Hist. 92.

A woman conceived at twenty, but from the catamenia being regular, she was doubtful of her situation. In June 1681, she had symptoms of premature uterine action, accompanied by retching, which proved fatal on the thirteenth day. In the abdomen was found a foetus, a large quantity of blood, and towards the left side of the cavity, a ruptured cyst; the corresponding tube, ovary, and

Illustrations like the foregoing are very satisfactory, since, in the early stages of such gestations, their organic relations are easily unfolded.

Gifford, in his volume of cases, relates one which may be referred to the present variety. October 3, 1730, the patient was seized with symptoms of abortion, attended with abdominal pains of unusual severity. She considered herself between two and three months pregnant; a tumour was discovered in the pelvis, and the *os uteri elevated about two inches above the pubis*. There was a sanguineous discharge per vaginam, and ultimately one of an aqueous nature from the rectum. On the 20th, a putrid foetus was evacuated *per anum*, and portions of a placenta in a state of decomposition; and on the 26th the woman died. The vagina, uterus, the broad and round ligaments, and the Fallopian tube on the left side, were natural; but on the right side the tube opened into a sac constituted by the corresponding ovary and broad ligament. This sac, which was placed behind, and adhering to the posterior surface of the uterus, contained portions of

ligament, were distinct; *but those of the right side could not be traced*; Miscell. Curios. Dec. 2, Ann. 2, p. 447.

A woman aged thirty-eight, when near the termination of her fourth pregnancy, was frightened by a hail storm. Pains resembling those of labour succeeded, without, however, being followed by the expulsion of the foetus, which was retained eleven years. An abscess formed at the umbilicus, whence foetal bones were evacuated, and three months thereafter the patient recovered; Miscell. Curios. Ann. 3, obs. 23. 1695.

A female of thirty-seven exhibited all the signs of pregnancy, but when labour should have commenced, foetal movement suddenly ceased, while swelling, induration, and a sense of weight towards the left side, continued. Several years after this event, a large cyst, containing a foetus without membranes, was found in the abdomen. On the removal of this body, another smaller cyst was discovered, which also contained a foetus, but enveloped in membranes. The uterus was of the natural size, and healthy; Miscell. Curios. Dec. 3, Ann. 4, obs. 78. 1696.

In a woman five months pregnant in 1682, foetal movement ceased, and the catamenia returned. Four years after this period she produced a living female child, and two years subsequently to this birth, a male infant. In 1694, an opening formed at the umbilicus, and in 1695, a second aperture, from which the head of a foetus protruded, followed by other foetal bones; and in August of the same year, the patient died; Miscell. Cur. Dec. 3, Ann. 4, obs. 87. 1696.

A female in her third or fourth pregnancy, soon after being received into the

the membranes and of the placenta, and communicated by an aperture four inches in diameter, with the middle of the rectum.¹

While collecting materials for this Memoir, Dr. Nebel, jun., from Heidelberg, called on me, and stated that his great-grandfather had had under his care a patient, who, after having been previously twice pregnant, conceived a third time at the age of thirty-six. During this gestation, there were occasional uterine effusions, excessive abdominal pains, obstinate constipation, and violent foetal movements at the period when her delivery was expected, without, however, being followed by such an event. At the decease of Dr. Nebel's great-grandfather, the management of this case devolved on the grandfather of Dr. Nebel, and she died April 25, 1767, at the age of ninety-one years, four months, and twenty-one days, when, in her abdomen was discovered a petrified foetus, ten and a quarter inches in length, and one pound in weight. This production is now in possession of my correspondent's father. In February 1838, I had a communication from Dr. Nebel, in which he

¹ Gifford, case 157, p. 375.

Hôtel Dieu of Paris, died, complaining of pain in the region of the umbilicus. A sac, which contained a foetus, was placed between the uterus and rectum, inclined rather to the right side. The uterus was enlarged, as also the left ovary, to the size of a hen's egg, and contained a fluid, and both the tubes were disorganized by inflammation; the right tube was incorporated with the cyst; Phil. Trans. vol. iv. p. 100.

+ A negress, after the retention of a foetus eighteen months, was affected with swelling at the umbilicus, which burst, and after discharging pus and foetal bones, she recovered. Sometime afterwards, she was naturally delivered of a living child; Phil. Trans. vol. iv. p. 173. 1697.

In a woman aged forty, an examination was made during the fifth month of gestation, when the uterus was found so elevated, and its aperture directed towards the pubes, that it was *reached with difficulty*. The patient sunk after a variety of complaints, and a foetus was discovered in a cyst, which was *connected with the tube and ovary* of the right side; Phil. Trans. vol. iv. p. 365. 1699.

The case of a woman in whom, after three successive impregnations, the foetus was extra-uterine, and from whom all three were removed by abscess, which formed at the umbilicus, is related in his treatise on Cæsarean section by Ruleau. The woman recovered; p. 10. Paris, 1704.

A woman aged sixty-six, retained a foetus twenty-eight years, and in the meantime gave birth to two children. In her fifty-fourth year, an abscess formed in the right groin, which, on bursting, discharged foetal bones, and an induration

states, that his father is of opinion that the foetus in question was *in utero* when labour supervened, as the attending midwife thought she felt its arm. When we consider, however, that in those days obstetric knowledge was only emerging from infancy, and that the details of the case are precisely such as attend extra-uterine gestations, I cannot help thinking, with due deference to Dr. Nebel, sen., that the pregnancy was originally of this latter class. The subject of the foregoing case was born November 11, 1675, and married 9th October, 1708.¹

Reifs relates a case in which the *cyst was formed by the left ovary and corresponding tube*. The rent happened in the side next the tube, and permitted an embryo of the third or fourth month to escape into the abdominal cavity. Through the medium of the funis, the foetus was still connected to the placenta, which was contained in, and adhered to, the cyst.²

The following case is so remarkable, that I cannot resist introducing it here, with a few verbal emendations. Sarah M'Kinna married at the age of sixteen, and menstruated for

¹ Act. Acad. Theodor. Palat. vol. ii. p. 404.

² Rust's Magaz. vol. xv. p. 128, 1823; Deizemeris.

remained, as if there were more lodged in the same region; Phil. Trans. abrid. vol. v. p. 246.

Ovulum cum ovario sinistro coherens, in quo foetus cerni potuit; Acta Lipsiæ, p. 265. 1706.

A woman advanced to the close of gestation had all the symptoms of labour, without, however, being followed by the expulsion of a foetus. This happened in 1652, and she died in 1708, when a foetus of *eight pounds* was found in the abdomen; Phil. Trans. vol. v. p. 524.

After an abortion in 1712, symptoms of pregnancy were again perceived, and in due time labour supervened, and continued for two days: the foetus could be felt through the parietes of the abdomen, and its movements were distinct, but on examination per vaginam, the *uterus was discovered to be empty*. In this condition the patient continued until 1747, when, at the age of sixty-one, she died of some pectoral affection; and in her abdomen, *arising from the right tube*, a tumour was found weighing eight pounds, consisting of a cyst and a male foetus with its placenta, all of which were partly converted into cartilage, and partly into bone; Hist. de l'Acad. Roy. des Scien. part 2, Ann. 1748, p. 73.

In August 1716, a woman in her eleventh gestation was examined per vaginam, owing to the supervention of pains resembling those of labour, when it was ascertained that *the uterus was empty*. Gastrotomy was proposed, but ob-

the first time a month thereafter. Ten months after marriage she showed symptoms of pregnancy, and was delivered at the natural term. She produced a second child ten months after the birth of her first. Two months subsequent to her second delivery, she again manifested symptoms of pregnancy, which, at the close of nine months subsided; and she had no other symptom of gestation, except suppression of the catamenia, which state continued for upwards of six years, during the first four of which she suffered much from uneasiness in the umbilical region. Some time during the seventh year, tumefaction of the abdomen and other phenomena induced her to believe that she had again conceived. About seven months after having considered herself pregnant, an abscess appeared an inch and a half above the umbilicus, six weeks antecedently to which, foetal movement ceased. The abscess burst, and the elbow of a foetus protruded at the wound, which a butcher extensively enlarged the following day, both upwards and downwards; thereafter he was enabled to fix his fingers under the jaw of the foetus, and to extract it. He afterwards looked

jected to, and fifteen months thereafter an abscess formed at the umbilicus which also the patient declined to have opened. She died the 23d March, 1723, when the skeleton of a foetus was removed from her body; Phil. Trans. vol. vi. p. 666.

A woman, whose catamenia had disappeared, continued to enlarge for nine months, while she suffered from vomiting and abdominal pain, which no remedy could alleviate; and although a foetus was perceptible through the abdominal parietes, yet *the uterus felt empty*. Her sufferings increased, and foetal movement ceased towards the close of pregnancy, and six months afterwards she died, when a mature foetus, *without any marks of decomposition*, was found towards the right side of the abdomen, having a placenta, and a funis eight inches long, the former adhering to the three upper lumbar vertebræ; Hist. de l'Acad. Roy. des Sci. p. 32, Ann. 1716.

A woman at the close of her pregnancy was seized with obscure pains, which soon subsided, but recurred in a month afterwards with increased severity; foetal movement ceased, and thereafter an opening formed at the umbilicus, whence issued a foetid discharge. Eighteen days after the motion of the foetus ceased, the aperture was dilated, and a full grown foetus extracted, but the patient died ten days after the operation; Manget. Theat. Anat. vol. ii. p. 142. 1717.

x A woman, aged forty-one, conceived in July 1720, and continued to advance in her pregnancy for seven months, when the abdomen began to diminish in size. In December 1721, she again conceived and produced a still-born child; and in May following she began to void foetal bones per rectum, after which her

into the abdomen, where he perceived a black object, whereupon he introduced his hand and extracted piece-meal, the entire of a foetal skeleton, and some decomposed animal matter. The abdomen was bound up after the operation, and in six weeks the woman was enabled to superintend her domestic duties. When the case was published, she had no complaint except a ventral hernia.¹

FORFAR, November 1, 1839.

DEAR SIR,—With this I send you the report of the case, and the foetal bones which I promised to procure for you from Dr. William Smith, who desires me to say, that you may make whatever use of them you think proper. The case was never published, as Dr. Smith always intended presenting it to his old preceptor Dr. H——, but has been prevented doing so. Understanding, however, that you are at present engaged in publishing a work on the subject, he considers that it would be of more advantage, and better known to the profession, by transmitting it to you.—I remain, &c. JAMES LAIRD.

¹ Phil. Trans. vol. viii. p. 517.

health was restored; and after three subsequent impregnations she gave birth to a living child on each occasion; Phil. Trans. vol. vii. p. 53.

In a female who conceived at forty-six, and in whom pains supervened at the usual period, without being followed by the expulsion of a foetus, impregnation happened twice afterwards, and each was followed by the birth of a living child: the woman lived to the age of ninety-four, and was persuaded that she still had a foetus in the abdomen, which she directed might be examined after her decease; her wishes were complied with, and a large ossified cyst containing an ossified foetus, was discovered towards the left side of the cavity; Hist. de l'Acad. des Sci., p. 422, Ann. 1721.

From a woman, aged thirty-eight, a foetus of five months was extracted by an incision through the vagina, and recovery followed; Journ. des Savans, Ann. 1722, p. 646, vol. i.

A married woman conceived in 1726, and pains supervened at the close of nine months, but subsided, without having accomplished the birth of the child: after a lapse of six years she again conceived, and when eight months advanced in this gestation, and after much pain, an ulcer formed at the umbilicus, through which the bones of a foetus were extracted, while, at the same time, the bones of another foetus were voided per rectum: the woman lived for some years thereafter, with a hernia at the umbilicus; Med. Essays, Ed., vol. v. p. 362.

In 1730, a woman, at the conclusion of her third pregnancy, was seized with temporary expulsive efforts, without being followed by child-birth; and there-

Mary Crighton, aged thirty, wife of Alex. Gibb, labourer, Aberlemno, county of Forfar, stated that she became pregnant for the second time in June 1826, and that she experienced no unusual sensations, nor that any particular incident occurred during the whole of her gestation, which proceeded in every respect like her former pregnancy, with the exception of the catamenia continuing regularly till the end of the ninth month, when she was seized with strong pains, similar to those in natural labour, at which time I was called to attend her. On examination per vaginam, the head of a full-grown child could be distinctly felt, filling the brim of the pelvis so completely, that it was impossible to detect the os uteri, which was pushed upwards under the pubes. Having satisfied myself that the case was a ventral pregnancy, I deemed it most advisable to palliate, and trust to nature. Venesection was therefore had recourse to, the bowels were relieved by an emollient clyster, an anodyne was administered, and warm fomentations were applied to the abdomen. The pains very

after milk was secreted, and the catamenia returned : in September 1741, the skeleton of a fœtus was extracted from an abscess which formed below the umbilicus, and the patient recovered ; Phil. Trans. vol. ix. p. 460.

April 1731, a pregnant female, the mother of a family, after severe mental distress, arising from one of her children while in her lap, having been suddenly cut off by convulsions, felt fœtal movement become more feeble, and in six or seven days thereafter cease entirely : in July 1733, she experienced pains, which after a time subsided : after January 1734, she conceived four different times, and at the close of each of these pregnancies gave birth easily and safely to a living child : in November 1747 she died in Grey's Hospital ; in the right iliac fossa a fœtus was found within a cyst with which the fimbriae of the corresponding tube were confounded ; the integuments of the fœtus were almost callous, but not decomposed ; Phil. Trans. vol. ix. p. 373.

December 1738, a female who had no unusual symptom previously, was seized, at the close of gestation, with pains which, after three days, subsided : the uneasiness afterwards recurred at intervals, but ultimately ceased ; she died February 1790, when an osseous cyst was found in the abdomen, containing a fœtus in a state of wonderful preservation, but completely deprived of its fluids ; Med. Chir. Trans. Lond. vol. v. p. 104.

In the Boston Magazine, U. S., a case is recorded, in which a woman retained a fœtus from 1731 to 1745, and during this period she produced a living child in each of six different births : three weeks after the last of these deliveries, an abscess formed at the umbilicus ; by which the bones of the retained fœtus were discharged.

soon subsided, as also foetal movement, which previously was considerable. She experienced little or no inconvenience till ten weeks afterwards, when the pains returned; but they were speedily relieved by a renewal of the former treatment. After this, she remained nearly free from all uneasiness for about three months, when she had another attack of her abdominal pains, but in a slighter degree. From this period, the abdomen began to diminish in size, and ultimately the tumefaction was so much reduced, that she was able to follow her usual employment, and she appeared on the harvest field along with her neighbours, to perform her ordinary day's work. She remained in this state until the end of the second year from the date of her conception, when she was attacked with violent sharp lancinating pains in the abdomen, extending more particularly towards her back. These continued without intermission for the whole of the third year. During

April 1740, a woman advanced to the termination of her eighth pregnancy, was seized with pains, which, however, subsided without being succeeded by childbirth: in April 1750 her uneasiness returned, and in July following, an abscess formed at the umbilicus, through which the retained foetus was extracted; Phil. Trans. vol. x. p. 153.

+ In the preceding volume of the same work, are the histories of two cases very imperfectly detailed at pages 108 and 170, in which foetal bones were evacuated per anum.

In a woman advanced to the termination of pregnancy in 1756, and suffering from pains, the foetal head was felt far advanced into the pelvis, but the os uteri closed, and so much elevated towards the os pubis, that it was reached with difficulty: a midwife in attendance, considering the advance of the head to be impeded merely by the membranes, scratched with her nail, and at last penetrated the intervening structure, but the foetus was not expelled, and the woman died undelivered. The dissection, as it was undertaken unknown to the husband, was so hurriedly conducted, that the only additional fact which has been noticed, worthy of mention is, that the *uterus was sound, and of the unimpregnated size*. A confused account is offered of the placenta; but as there is no mention made of a cyst, this last must have been viewed as the placenta, as is obvious from its very extensive attachments. The patient menstruated regularly, and experienced no uneasiness till the close of pregnancy; Med. Observ. and Inquir. vol. iii. p. 44.

A married woman, named Noon, aged twenty-one, advanced without any unusual complaint to the close of her first pregnancy, in August 1756, when pains supervened, which continued three weeks, after which the abdomen became so large, that it was thought she had mistaken her condition, and was not preg-

this period, decomposition of the softer structures having taken place, the bones of the foetus could now be easily traced through the parietes of the abdomen, and per rectum. At the end of this year, an obstinate and very foetid diarrhoea commenced, and only subsided on the bones being extracted per anum, which was effected exactly three years and four months from the commencement of her pregnancy. Sometime previously to their removal, the sharp edge of one of the parietal bones was felt projecting through the rectum; the aperture was enlarged with a probe-pointed bistoury, so as to enable me to remove the bones in succession by long forceps. The wound healed favourably, and the woman's health was soon re-established. About two years afterwards, she was delivered at the full period of a foetus, which was still-born, in consequence of protrusion of the funis, and the long detention of the head in the pelvis. After an interval of three

nant, but ascitic. About June 1757, an opening formed at the umbilicus, which gave exit to about four-gallons of fluid, mixed with fleshy productions, and some small bones, and sometime afterwards, the aperture became much contracted. Her health being considerably improved, an incision was made through the abdominal parietes, and the skeletons of two foetuses extracted, during which proceeding the operator and several other persons repeatedly introduced their hands into the abdominal cavity. The woman recovered so speedily and thoroughly, that five months after the operation she conceived, and in due time was delivered of a living child. She became pregnant six different times afterwards, and at the termination of each of these gestations, produced a living infant; and when the case was published, she enjoyed perfect health and vigour of constitution; *Med. Comment. Edin. vol. ii. p. 72.*

A married woman, aged twenty-four, when six months pregnant, was seized, after mental agitation, with lumbar pains and uterine effusion, which subsided after appropriate treatment, but were succeeded by abdominal distension for about six months, when her size decreased, the menses returned, and were attended with pain, and milk was secreted. This pregnancy happened in July 1751, and in May 1757, she began to pass foetal bones per rectum. In June, her uneasiness subsided, and her general health was much improved; but two months afterwards, from some unknown cause, she died after a few days' illness; *Med. Comment. Edin. vol. ii. p. 77.*

A woman aged twenty-four, conceived, but from the menses recurring regularly, she became apprehensive of some misfortune. After some time, foetal movement ceased, abdominal tumefaction subsided, and she again conceived and produced a living child; and sometime afterwards, while at the night-table, she felt much pain in the rectum, and obstruction to the evacuation of its contents.

years, she has since produced a living child, which presented the breech. She is at present in the sixth month of another pregnancy, and in the enjoyment of good health.

REMARKS.

1. The extra-uterine foetus appeared to have died exactly at the end of the ninth month, when she was for the first time seized with labour pains. There was neither at that nor at any other time, a sanguineous discharge from the vagina.

2. She was not sensible of having received any injury during the early part of her pregnancy, but about one month after her conception she had an attack of British cholera.

3. The milk appeared for a few weeks after the ninth month.

4. About the time the catamenia reappeared, after the ninth month, and while the patient was in the act of mictu-

On examination, foetal bones were discovered therein; Haller's Disput. Med. vol. iv. p. 79. 1758.

In the same volume of the same work, p. 797, reference is made to Langius for a case in which the foetus, after a residence of ten years in the abdomen of its mother, had been discharged piecemeal per rectum.

A woman aged twenty-eight, second pregnancy, more indisposed than in her former gestation, was seized at the close of nine months with pains, which, however, subsided without being followed by childbirth. The abdomen diminished in size, the menses reappeared, the patient again conceived, and in due time produced a living healthy child. Five days after delivery, the tumour resulting from the retention of the former foetus became painful, followed by impaired general health. Towards the right *rectus* muscle, a longitudinal incision was made through the most prominent part of the tumour, when much pus was evacuated, and a foetus extracted. The patient recovered so well after the operation, as to become a good nurse; Med. Obs. and Inquir. Lond. vol. ii. p. 369. 1760.

A woman aged thirty, when in the first or second month of pregnancy, was seized with hypogastric uneasiness, and obstruction to the evacuation of the rectum and bladder. *The uterus was drawn up in the brim, and its aperture resting upon the os pubis.* About a month after this, something resembling a mole passed per vaginam, after which the difficulty in voiding urine and faeces, and the hypogastric uneasiness, returned. The patient died in the ninth month, and ten days previously foetal movement ceased. A cavity was found in the left tube sufficiently large to contain a filbert; and posterior to the uterus, and between it and the stomach, was a membranous sac containing a foetus, a little water, some membranes, a double funis, a large and small placenta, all very

rition, a small fleshy mass, the size and appearance of one-fourth of the placenta, was extruded without pain.

5. Her labours, as yet, have all been difficult. In the first forceps were used.

6. She is of a lively, cheerful, and rather amorous disposition.

The following case, as the dissection was conducted and witnessed by men of acknowledged eminence, must be perused with interest. May 26, 1828, the patient, a married woman of thirty-two, and the mother of four children, applied to Dr. Jackson Gordon, in consequence of some ailments of several months' duration, such as obtuse pain in the right hypochondrium, impaired appetite and despondency, which last was ascribed to mental causes: she also suffered from profuse menorrhagia, which recurred at short intervals; ab-

much decomposed; Journ. Gen. de Med. Chirurg. et de Pharm. vol. xxvii. p. 302.

A patient, at the close of pregnancy, was seized with pains, without, however, being succeeded by childbirth; but the abdomen continued in a state of enlargement for eighteen months, when an evacuation of fœtal bones commenced per anum, and after a year the woman recovered; Camper. Anat. et Pathol. Tab. 2. 1762.

A woman who exhibited the usual phenomena, exceeded the ordinary term of pregnancy, without the supervision of uterine action. The size of the abdomen continued two years and seven months undiminished, and she died in a state of extreme emaciation. On the right side of the uterus, in a cyst, resembling the structure of the secundines, a fœtus of five months, and about a pound of turbid fluid, were discovered. The left tube was *enlarged, elongated*, and calcous at its extremity; Perfect's Cases, vol. ii. p. 164. 1770.

Dr. Denman, in his Engravings, No. 13, 1815, gives a representation of an extra-uterine fœtus procured from the body of a woman, who, after several abortions, advanced with this misplaced pregnancy to the close of nine months, when the usual phenomena of parturition supervened; but after a time ceased, without being attended by delivery. From the period of this impregnation she lived thirty-two years, in the enjoyment of tolerable health, and her death was not attributable to her situation. A globular sac, containing a fœtus of seven pounds, covered with calcareous matter, was found adhering to the right side of the abdomen; there was a funis six inches in length, but no remnants of the placenta.

A woman aged twenty-six, who occasionally suffered from constipation, tenesmus, diarrhœa, and uterine effusions, from 1766 to December 1770, com-

dominal distension, and flatulent eructations. The abdomen was more tumid than usual at her period of pregnancy; in her former gestations, the catamenia were regular. June 2d, she had an effusion of blood per vaginam, the os uteri was slightly dilated and directed backwards towards the sacrum, and a tumour in connection with the uterus was detected. June 7th, complained of excessive pain in the hypogastric region, and urgent thirst; there was great irritability of stomach, and the pulse was almost imperceptible. The patient was transfused by opening a vein in her husband, but she died in a few hours. The abdomen was equally tumid as in the sixth month of pregnancy, and its cavity filled with coagulated and fluid blood; from among the clots, Dr. Montgomery, Professor of Midwifery, lifted one the size of a goose egg, which contained a foetus of the tenth week, surrounded by its amnion. The Professor very minutely afterwards examined

menced at this latter date to void decomposed animal matter, and thereafter foetal bones, per rectum, which process continued till September 1771, when she died. Independently of the communication between the pelvis and the rectum, the uterus was sound, the fimbriae of the right tube obliterated, and the left ovary distended, elongated, and open almost throughout; Journ. de Med. Chirurg. Pharm. &c., vol. xxix. p. 324.

A married woman, aged twenty-four, who in her first confinement produced a living child, and at different periods thereafter two abortions, in June 1763 considered herself a fourth time pregnant; and in August 1772 she died, when a tumour inclined to the right side, the size of the gravid uterus between the sixth and seventh month, was found in the abdomen. *With this tumour the right ovary and tube were confounded*, and it enclosed the bones of a foetus of seven months. The ovary and tube on the left side were distinct; Hist. de l'Acad. Roy. des Sci. An. 1773, p. 270.

October 1771, a woman aged twenty-six, in the enjoyment of health, suspected that she had conceived. June 1772, pains resembling those of labour supervened, and continued eight or ten days, but after having been twice examined per vaginam, no uterine dilatation could be discovered. December 1772, a purulent discharge commenced per anum. June 1773, foetal bones were evacuated in the same direction, which process continued till March 1774; and in April following, the patient was so far recovered as to be enabled to conduct her domestic avocations; Med. Comment. Edin. vol. v. p. 314.

In 1752, a woman conceived, and was, at the close of gestation, seized with abdominal pains, which ceased, without being attended with childbirth; and in 1774 she died, when a foetus without membranes was found in the abdomen, encased in a strong incrustation, and the uterus and its appendages in the con-

the parts, which, to use his own words, presented universally, marks of very active and long-continued inflammation, false membranes being found in every direction, and union having taken place at a great variety of points, so as to confound many of the parts inextricably. The altered condition was more particularly remarkable at the left side, in the situation of the tumour, which consisted of the ovary, tube, and broad ligament of *that side*, very much increased in size, and altered in structure. The fimbriæ of the left tube were firmly united to the left ovary, and both parts exhibited exactly the condition that might have been expected to arise from their having been greatly enlarged, and ultimately burst from some body distending them from within. In the centre of the lacerated ovary, a *corpus luteum* was seen, so separated from the ambient parts, as to appear like a yellow berry therein accidentally deposited. As accelerating the accident, it is proper to men-

dition natural to these organs in the unimpregnated state; Sandifort, Lib. 2, p. 35.

October 1782, a woman aged thirty-five, frequently complaining of strangury, was examined per vaginam, when the *os uteri was found turned upwards and forwards against the os pubis*. June 1783, examination was repeated, when the tumour formerly felt between the vagina and rectum was still perceptible. At first the case was considered one of diseased ovarium. April 1784, foetal bones were voided per rectum, and the patient ultimately recovered; Med. Journ. Lond. vol. v. p. 396.

A woman who retained a foetus three years, was seized with a swelling at the umbilicus, which burst, in consequence of jumping over a hedge; and after discharging bones for a year, the opening closed. Three years thereafter, another swelling formed, which also burst during some exertion, when about a yard of intestine protruded, which sloughed off in twelve days, and the woman died; Med. Journ. Lond. vol. vi. p. 52. 1783.

A woman aged forty-two, was seized at the close of her thirteenth gestation with hæmorrhage and pains; '*mais le col de la matrice n'étoit pas dilaté; pendant la duré entière des douleurs les parties restoient dans la même état.*' About eighteen months from this period, trifling uterine effusion supervened, and continued several days. The patient died at the age of seventy-five years, so that the foetus was retained thirty-three years. The abdomen contained an ovoid mass weighing five and a half pounds, composed of perfectly dry cartilaginous and osseous structures, enclosing a mature male foetus, with its funis and placenta. After the removal of this last, another body the size of a hen's egg, also cartilaginous, containing a foetus the size of one of two months, was found to

tion, that, on the 7th April, in endeavouring to prevent her husband, who was intoxicated, going out, he fell, his head coming in collision with her pubes so violently as to lay her also prostrate, and to occasion ailments from which she never recovered. After the fall she fainted, and was for some time insensible. The uterus was as much enlarged as it would have been at the same period of uterine pregnancy, and lined with decidua.¹

The following case, which occurred in December 1829, at Lima, was originally published in Spanish, and was communicated to me by Dr. A. Smith, author of "Peru as it is," who resided for some years, and superintended a public hospital, in the above city. Senora Muga, aged thirty-two, conceived for the sixth time at the above date; and in two of her previous pregnancies produced twins. In this her last gestation, no unusual symptom occurred until the 5th January following,

¹ Dublin Journal of Med. and Chem. Science, vol. ii.

the left side of the uterus; Journ. de Med. Chirurg. et Pharm. &c., vol. lxxv. p. 29. 1785.

A woman aged twenty-three, retained the fœtus of her second gestation from the early part of 1785 to January 1787, when it was removed by abscess formed at the umbilicus, and in a month she had a complete recovery; Med. Journ. Lond. vol. viii. p. 147.

A woman five months pregnant, fainted in consequence of some severe mental emotion, and she continued seven years thereafter in delicate health, owing, as was supposed, to the fœtus having passed through a rent in the uterus into the abdominal cavity. About this period, the patient again became pregnant. Twenty-one years after the first ovum was thought to have escaped from the uterus, fœtal bones were voided per rectum, which process continued for upwards of twenty-eight years longer; and from the number of the bones, it was inferred that there had been two fœtuses in the abdomen. The body was not examined; Med. Journ. Lond. vol. viii. p. 335. 1787.

A woman aged thirty-six, who had exceeded the usual term of gestation four months, was then seized with pains resembling those of labour, and on examination, the fœtal head seemed far advanced into the pelvic cavity, but the *os uteri* was elevated above the pubes. The abdomen was as tumid as might be expected at seven months. In a few days the tumidity began to subside, and a bone was discharged per anum. A communication with the abdomen was discovered, through which the remainder of the fœtal bones were evacuated, and the patient recovered; Med. Comment. Edin. vol. xv. p. 323. 1788.

A woman aged thirty-seven, became pregnant for the fifth time in July 1789,

when there appeared per vaginam a sanguineous effusion, which continued five days. On the 20th April, a double tumour was discovered in the abdomen, but in other respects her health had undergone no change. She now considered herself five months pregnant, but as she had not felt the motions of the foetus, and was desirous of being correctly informed regarding her situation, she requested a vaginal examination, which was acceded to, when one of the tumours, the size of a clenched hand, was felt in the hypogastrium, and the other inclined towards the right iliac fossa; the uterus was lower than usual in the pelvis, and seemed empty. At this period two physicians were consulted, and they considered and treated her complaint as a scirrhus affection. On the 9th May, the patient was seized with excruciating pain in the right iliac fossa, followed by severe headach, flushed countenance, hurried respiration, and hard strong pulse. Again, an examination was

and a short period after foetal movement became perceptible, she had hæmorrhage, accompanied by abdominal pains, and something, which was thought to be placenta, was evacuated. The sanguineous effusion continued for a month, and the motions of the foetus ceased. September 10, 1790, she died. The cyst of the foetus, but considered by the narrator of the case as the placenta, was described as being one-tenth of an inch in thickness, and having the *left tube and ovary reflected on its surface*. The foetus was a mature female, supposed to have been fifteen months retained. The uterus was elevated in the brim of the pelvis, and contained no decidua; Mem. Med. Soc. Lond. vol. iii. p. 184.

A woman who had no unusual symptom during gestation, was seized with pains at the usual period, but on examination, *the cervix uteri was felt as in the unimpregnated state, and the aperture of the organ closed*. The pains continued eight days; and on a second examination, the practitioner was satisfied that the foetus, which could be felt through the parietes of the abdomen, was not *in utero*. Gastrotomy was performed, and a dead foetus with its placenta extracted; and the patient, four hours thereafter, died, from exhaustion and loss of blood consequent on the operation, and separation of the placenta; Mem. Med. Soc. Lond. vol. iii. p. 197. 1789.

Sprenghel, in his History of Medicine, vol. vii. p. 290, *et seq.* refers to the following authorities for cases of this nature, viz., Comax, a professor at Vienna, said to have been the first who operated successfully for gastrotomy; Hector and Gassar, both of Augsbourg; Soligen, who is said to have practised the operation repeatedly; C. Denys, a French Physician, who relates several cases of extra-uterine conception, followed by abscesses, from which foetuses were extracted; Runge, a surgeon of Bremen, who operated on a woman in whose abdomen a foetus had been retained eleven years; Spaering, a Swedish physi-

made per vaginam, when, as formerly, the uterine cavity felt empty, and the aperture of the organ closed. The patient was under the management of a Madame Fessel, a respectable and experienced midwife, who, in a few days after this date, distinctly felt foetal movement. From an aggravation of the patient's sufferings, two additional consultations were held, at one of which five physicians were present; three of these gentlemen agreed with Madame Fessel, that the case was one of extra-uterine gestation, while the others entertained a different opinion. The contractions of the cyst which contained the foetus could be distinctly felt, as also foetal movement, until the 15th August. She was now seized with acute pain above the left groin, where one of the extremities of the foetus could be felt. After a variety of other sufferings, such as acute, diffused abdominal pain, vomiting, singultus, and syncope, the patient expired on the 20th in great agony.

cian, who, with a lancet, opened an abscess, and from the lower part of the abdomen extracted a foetus of thirteen years' retention; Breyer of Leipsic, and Weinhardt, both of whom operated successfully for gastrotomy; Professor Colomb of Lyons, and Professor Josephus of Rostock; both were unsuccessful.

In a woman whose menses were suppressed, and who was seized at the close of nine months with pains which subsided in a few days, an ulcer formed sometime afterwards near the umbilicus, and discharged fetal bones. The woman died, and the right tube was traced into the cyst which had contained the foetus; Trans. for the Improv. of Med. Chir. Know. vol. ii. p. 1. 1790.

August 1790, a woman of colour, aged twenty-two, supposed to be in labour six days, was found to have *no uterine dilatation*. In December following, a circumscribed swelling formed at the umbilicus, and bursting, the feet of a mature foetus protruded, and another opening formed, which permitted an arm to advance, after which both apertures were laid into one, and the foetus extracted, but no placenta was found. In February 1791 the patient was restored to health; Med. Comment. Edin. vol. xvii. p. 481.

A married woman, at the close of her third pregnancy, had pains for two days, and they subsided; and ten years afterwards, by an incision to the left of the *linea alba*, the skeleton of a mature foetus was extracted, but no placenta could be found; Med. Facts and Observ. vol. i. p. 73. 1791.

A peasant aged thirty-six, in whose abdomen an induration was felt four fingers' breadth above the *crista ili*, a longitudinal incision was made over the indurated body, and a foetus extracted, which had been retained beyond the usual term. Thirty-eight days after the operation the woman died. A placenta was found cohering to the external and anterior part of one of the tubes, and but slightly to the omentum; Comment. de Rebus. vol. xxxv. p. 289. 1793.

Autopsy.—On dividing the abdominal parietes, a male foetus, which weighed five pounds four ounces, and measured twenty-one inches in length, was found to occupy, in a transverse position, the whole of the umbilical region; the spine was directed towards the fore part of the abdomen, and the head, covered with the only remaining portion of the membranes of the ovum, to the left hypochondriac region. The right arm extended to the os pubis, while the left was bent under the head; and the sacral limbs and feet were lodged in the right iliac fossa. The funis was thirty-four and a half inches in length, and the placenta, which was of a pyriform shape, livid colour externally, and dark internally, and occupied the hypogastric region, weighed two pounds fourteen ounces. What was considered the placenta adhered to the peritoneum of the left iliac fossa, broad ligaments, and to the omentum, which was very much wasted; but more especially to the left side of the

✕ A female, aged twenty-eight, was seized with pains at the close of her third pregnancy in the summer of 1795, but although the cervix was obliterated, yet there was no dilatation of the os uteri, and after three days the uneasiness subsided. In 1800 she again conceived, and advanced to the close of the usual term, when, in consequence of the obstruction offered by the former foetus, it became necessary to extract the present child by the feet. Inflammation and suppuration followed, and the patient died, voiding pus and foetal bones by the rectum and vagina, which at last formed but one common passage; *Med. Chir. Trans. Lond.* vol. v. p. 122.

A woman, whose pregnancy proceeded for nine months, submitted to gastrotomy thirteen months thereafter, on the left side of the abdomen. The placenta could not be discovered, and the patient, after some formidable complaints, recovered; *Mem. Med. Soc. Lond.* vol. iv. p. 342. 1795.

✕ A matron, aged twenty-six, who had previously produced three children, January 21, 1788, when a few months pregnant, felt as if something had given way within, in consequence of her carrying a considerable weight upon her left haunch. This sensation was followed by an inclination to bear down, but in a few days she was so far recovered as to be able to exhibit on the light fantastic toe, which exercise was succeeded the ensuing day by severe pain and sanguineous effusion per vaginam. After an examination, the case was considered by several practitioners as one of retroversion, when repeated attempts were made at reduction, and to rupture the coats of the ovum by passing a probe three inches within the uterus, but without any result. The os uteri was so much elevated towards the top of the pubis, that it was reached with difficulty. On the 7th April following, she passed per anum a profusion of

uterus, corresponding ovary and tube. The structures connecting the placenta with the ambient parts, more particularly with the left tube and ovary, were furnished with large blood-vessels. The weight of the uterus was eleven ounces; its length six and a half inches, its breadth four inches and eight lines; the thickness of its parietes one inch and four lines. On laying open the organ, its cavity appeared almost obliterated: both the Fallopian tubes were impervious at their uterine extremity. The cervix uteri and vagina were of the same livid colour as the placenta.

From the weight, colour, and extensive adhesions of the structure which was considered as the placenta, there cannot be a doubt that the cyst which contained the foetus must have been viewed in this light. It seems also a legitimate inference not only that fecundation had taken place in the left ovary, but that the product had continued its connection with this

purulent and dark grumous matter, after which the tumefaction of the abdomen began to subside, and her health to improve; Med. Comment. Edin. vol. xx. p. 254.

In the third pregnancy of a female aged thirty-three, symptoms of approaching labour persisted three weeks, and then subsided, and the patient resumed her domestic avocations. *On examining the uterus, it was so much elevated in the brim that its aperture was reached with difficulty.* After four years, the woman died, when a mature foetus, enclosed in a membrane of a yellow tint, was found in the left iliac region. The uterus was sound, and its appendages on the right side distinct, but in consequence of the *extension of the left tube, the corresponding ovary was obliterated*; Recueil Period. de la Soci. de Med. de Paris, vol. xiii. p. 63, An. 5.

A woman aged forty, when three months advanced in her sixth pregnancy, received repeated kicks on the abdomen, which were succeeded by pain, and effusion of blood per vaginam. The injury was inflicted in the early part of 1795, and after a variety of suffering until the 5th March 1797, an abscess formed at the umbilicus, which discharged about one and a half pounds of pus, while about eight ounces were also evacuated per rectum. In May following, foetal bones protruded from the abscess at the umbilicus; and on the 22d November 1798, the woman died. On the right side, the broad ligament, ovary, and tube, were quite distinct, connected with the outer surface of the cyst, which contained the foetus; but of the same organs on the left side, not a vestige could be traced. The cyst seemed to originate from the left side of the uterus; it contained the remainder of the foetal bones, but no placenta, and it formed two communications with the colon, but there was no passage from the

organ, and likewise contracted and maintained a vascular relation with the corresponding uterine tube.¹

For the two following cases I am indebted to Samuel Smith, Esquire, Lecturer on Midwifery, Leeds, and to his son, Dr. George Pyemont Smith, graduate of the University of Edinburgh, and now a practitioner in Leeds. Mrs. Clapham, aged thirty-four, after having been fourteen years married, and a year subsequent to the date of her marriage, produced one child, voided per anum on the 15th January 1835, a hard substance, and was discovered to have in the rectum a collection of foetal bones, consisting of those of the cranium and extremities, which were readily removed. Six years antecedently to the above date, the menses had disappeared for about seven weeks, and she had then symptoms of abortion; and from the period of her delivery, her health had always been delicate. On the 12th August 1833, when in the act of

¹ Noticia de una fecundidad extraordinaria. Lima, 1830.

cyst into the vagina. The uterus was of the unimpregnated size; *Med. Annals*, Edin. vol. ii. p. 317, and vol. iv. p. 401.

May 3, 1779, a woman who had produced several children, and, at this date, had exceeded the natural term about four months, was discovered to have a preternatural aperture in the vagina communicating with the intestines; by this passage the whole of the foetal bones were removed, and the excreta continued to escape; and, in August following, when the case was published, the woman, though still suffering from the loathsome results of an artificial anus, enjoyed tolerable health; *Med. and Phys. Jour.*, Lond. vol. ii. p. 262.

A woman, aged about thirty-three, and the mother of six living children, was seized with uterine action at the full time, in the month of August, in her seventh pregnancy; after the pains continued for some time, some of the bones of the hands and feet were discharged per vaginam: March following, an abscess formed about three inches above the pubes, through which a rib protruded; an incision of three inches in length, near the linea alba, was made in the direction of the rectus muscle, through which the remainder of the bones were removed, and the woman speedily recovered; *Med. Records and Researches*, p. 260.

September 1800, a woman, aged thirty six, was seized, while pregnant, with an inflammatory affection, which was soon subdued. January following, she quickened and enjoyed tolerable health till April, when she felt the child struggle violently, and soon thereafter its motions entirely ceased; the patient nearly fainted at the time, and this feeling was followed by sensations resembling impending uterine action, which continued six weeks. February 1802, the rec-

stepping into a gig, she was suddenly seized with so severe a pain in the abdomen, and sickness, as to be obliged to return home and betake herself to bed. For a day and a night the uneasiness continued, and was relieved by opium: at this period there was no uterine effusion, and the catamenia had been suspended upwards of three months, and the abdomen had increased in size; but with the exception of distension of the mammæ, the usual signs of pregnancy were absent. About two months after this date, there was a slight effusion of blood per vaginam; the menses then became regular; and for several weeks thereafter, she had occasional offensive discharges. The abdomen now began to diminish in size, and the breasts to become flaccid. In the early part of 1834, the menses were again suppressed; but in September following, her health improved, and the menses re-appeared, and continued regular. At this period a tumour the thickness of the wrist, and six

tum was found to contain foetal bones; and, in March, an entire foetus was thereafter extracted, and the patient had a perfect recovery; Medical Annals, Edin., vol. vii. p. 412.

An abdominal enlargement existed for three years, during which period the patient conceived and brought into the world a well formed child. Very serious derangement in the system at length disclosed the presence of a foetus in the abdominal cavity. Gastrotomy being practised, gave issue to another child, in which the prolonged residence in its mother's womb had induced partial putrefaction. The patient, after an illness of fifty-five days from the time of the operation, was eventually cured; Ed. Journ. Med. Sci. No. 3, p. 223.

A married woman, aged forty-seven, had long suffered from uneasiness of the abdomen, which was much tumefied, more especially towards the left side; and from her age, and the catamenia having been suspended sixteen months, her case was considered one of ovarian disease; a diarrhoea at length supervened, the excreta being mixed with blood and pus; and the patient died in the seventeenth month of her obstruction, when the bones of a full-grown foetus were found behind the uterus, and had perforated the rectum; Mem. Med. Soc. Lond. vol. vi. p. 107.

A married woman, aged thirty-seven, sixth pregnancy; in the first two months much pain in voiding urine and fæces; menses regular, but scanty, and *os uteri reached with difficulty*, wherefore case considered one of retroversion. January 1802, delivery expected, but foetal movement ceased. March 1804, foetal bones evacuated per rectum, and ultimately the patient was restored to perfect health; Med. and Phys. Journ. Lond. vol. xi. p. 293.

A woman, aged forty, conceived in February 1803; after a variety of com-

or seven inches long, easily pushed aside, was felt to extend obliquely from the spinous process of the right ilium to the pubes; in about a month this tumour began to diminish in size, and at last it entirely subsided; but another, however, the size of a hen's egg, and painful on pressure, was felt at the left side near the anterior superior spinous process of the ilium. Emollient injections were occasionally administered, and sometimes a particle of bone could be discovered in the excreta. Her health again became impaired, which, with neuralgia of the anterior crural nerve, confined her for the most part to bed. February 23, 1836, after much and protracted suffering, a parietal bone was extracted from the rectum; and, on the 7th of March, some more cranial bones. In April following, she again improved so much in her health, that she was enabled to superintend her domestic avocations; but from contraction of the muscles of the left leg, she be-

plaints, blood and foetal bones were evacuated per rectum in April 1805; and fifteen days after the removal of the latter, the patient was restored to perfect health; *Journ. de Med. Chir. et Pharm.* vol. xviii. p. 389.

A woman, aged sixty, died the 22d August 1805, from inflammation of the bowels; she had been twenty-six years married, and suspected, but was not positive, that she had conceived shortly thereafter; an ossified foetus, connected with a partially ossified uterus, was found in her abdomen; *Med. and Surg. Journ. Edin.* vol. ii. p. 22.

In a female aged about thirty, seven months pregnant in April 1800, foetal movement ceased, after pains resembling those of labour had continued for three weeks, but without expulsion of the uterine contents: in November following she again conceived, and was in due time delivered of an unhealthy child; after the pains of the previous gestation had subsided, a hard and painful body was always felt in the right side. On the 9th August 1807, she died, when a sac, mistaken for the uterus, was discovered in the abdomen, containing a foetus of six or seven months, and about a pint of fluid like beer grounds; *Med. Phys. Journ. Lond.*, vol. vi. p. 360.

A woman died, aged eighty-five, and a petrified foetus was found in her abdomen, where it was supposed to have been retained between thirty and forty years; *Edin. Med. and Surg. Journ.* vol. ii. p. 19. 1806.

A lady of rank, aged thirty-two, sensitive, spare habit; when nearly three months pregnant, faintings; os uteri inclined to the right side, but not dilated; and the uterus was not enlarged: faintings repeated from time to time, with painful micturition, and excessive uneasiness from mere contact of the finger with the os uteri. There was excessive pain in the abdomen, and in a few days the patient died. In the abdomen were found large quantities of dark,

came a little lame. On the 22d June 1837, after two days' suffering, she lost, per rectum, several pounds of blood, and gradually sunk on the 26th. The body was examined the following day in the presence of Mr. Close, Mr. Morley, and my pupils. Two small melanosed tumours, the size of grapes, were found attached to the omentum; the left ovary contained no bones; it firmly adhered to, and communicated with, the sigmoid flexure of the colon, but the communication was nearly obliterated. A parietal bone was discovered in the rectum; but the source of the hemorrhage eluded detection.

An unmarried woman, who had formerly borne one child, and who, after connection with a dragoon soldier, suspecting that she had again conceived, destroyed herself by corrosive sublimate. The sexual intercourse was supposed to have happened about eighteen days before her decease. On dissection, the uterus was observed to be about double its unimpregnated

coagulated blood, inflammation and gangrene of the intestines, enlargement and an echymosed state of the corpus uteri, particularly to the left side. *Under the left ovary and fimbriae of the corresponding tube*, a male foetus, three and a half months, with a funis of five inches long; *enlargement of the left ovary*, with a soft fungous substance, regarded as the placenta; and numerous adhesions betwixt this organ and corresponding tube; Evesque à Paris. 1806.

October 1807, Mrs. S. was thought to be in labour, but after a time the symptoms subsided, and she resumed her domestic duties. May 1808, a hard body felt towards the right side below the umbilicus. October 1809, November 1812, and February 1815, she produced a living healthy child, after easy natural labours. From 1st to the 21st March of this latter year, she suffered from a variety of complaints, more especially pain in the tumour, which burst on the 24th, and exhaled a most intolerable odour. On the 27th, by the dilatation of the opening, a mature foetus was extracted, and after a protracted convalescence, the patient recovered; Med. and Phys. Journ. Lond. vol. xxxv. p. 278.

A woman aged thirty, conceived in September 1810, and never experienced better health till 18th June following, when pains like those of labour supervened, which, with foetal movement, ceased after two days, and milk was secreted. Sometime thereafter, gastrotomy; a putrid female foetus was extracted, and the patient died in two days, when the cyst which had contained the foetus was found on the right side, in connexion with the corresponding ovary. No traces of previous injury could be discovered in the uterus; Journ. de Med. Chir. Pharm. &c., vol. xxii. p. 437, An. 1811.

In January 1811, a woman six months pregnant, stated that from the third month she had very acute pains in the abdomen, with tension, an indurated

ed size and thickness; and its cavity was lined with decidua. A vesicle the size of a pea was attached to the left ovary by a slender filament, and placed near, but not embraced by the fimbriæ of the corresponding tube.

For the next case I am indebted to the kindness of an old brother officer, Dr. John Loudon, Surgeon, R.N., resident physician, Pernambuco, Brazils. "August 11, 1836, I was called to visit a lady about forty years of age. She was delivered twenty-nine days previously, of a male child, being her first birth, and the labour was natural but tedious. After delivery, a tumour was perceived within the abdomen, occupying a considerable portion of the cavity, and inclining towards the left ilium; this tumour seemed to be a second foetus extra-uterine. This body has descended to the lower part of the abdomen, and the head of a foetus can now be distinctly felt in the hypogastric region, still somewhat inclined to the left side. The

bulky swelling to the right, and a tumour as firm but larger towards the left side of the cavity. Fever, with restless nights, supervened, and emaciation followed. February 26, labour commenced, and terminated favourably in the evening, but the fulness in the right side continued. Fever, pain, and exhaustion increased, and she died four days after her delivery. *Dissection*.—March 2, a thick, dense, false membrane was found, connecting all the viscera together, and to the parietes of the abdomen, in such a manner as to form a sac, which was ruptured anteriorly and superiorly, and which permitted the escape of a foetus of two lbs., and a considerable quantity of blood. The uterus was inclined to the right side. An ovary and a tube, whether the right or left is not particularized, had disappeared; and the extra-uterine was younger by three months than the uterine foetus; Madame la Chapelle, Prat. Accouch. tom. 3, p. 152.

February 1812, a woman aged twenty-eight, third pregnancy, whose foetus had been retained fourteen months, had embryulcia performed per rectum, the foetus removed piecemeal, and her health perfectly restored three months thereafter; Bonnie, à Paris. 1822.

February 1814, a woman aged thirty-eight, fifth gestation; abdominal uneasiness in the third month, which in the ninth became intolerable, at which period something like a mole was extruded, without any alleviation of her sufferings. Head of a foetus being felt through the abdominal parietes, gastrotomy was performed, and a well-developed female child extracted alive. The wound cicatrized regularly, but the patient died of a slow fever, and the only account offered of the dissection is, that the *placenta was found adhering to the fundus uteri, ovary, and tube*; Nuov. Journ. de Med. Chir. et Pharm. vol. xv. p. 51.

A married woman, aged twenty-four, considered herself, on the 2d Novem-

patient has suffered a little from irritation and mental anxiety, but there has scarcely been any fever. Her appetite is impaired, and she is rather emaciated; and the motions of the retained foetus are not perceptible." Dr. Loudon concluded his communication, by stating, that so long as the patient suffered so little, he would, and very properly, oppose gastro-tomy, which had been hinted at by other practitioners who had also been consulted.

In reference to the foregoing case, I have since received the following communication from Dr. Loudon:—

PERNAMBUCO, 11th May 1839.

MY DEAR SIR,—All the information I can communicate to you on this subject is scanty, and consequently will, I fear, scarcely be of such a nature as to merit a place in your memoir.

A few days after the date of my former letter to you, a con-

ber 1836, six months advanced in her second pregnancy, and during the whole period suffered much from irritability of stomach. When two months pregnant, she had a fall, which accident was succeeded, by trifling sanguineous effusion per vaginam, which alternately subsided and reappeared accompanied by severe abdominal pain, particularly felt in the umbilical and lumbar regions. November 4, she died, and a male foetus of the usual size was found in the right lumbar region; a thick, solid cyst, in the umbilical and left lumbar regions, adhering to the ambient structures; the sac was torn, and contained the placenta, membranes, and funis; the right tube and ovary were distinct and healthy; the left, to the extent of two and a half inches, could be traced, *but the remainder of it, as well as the corresponding ovary, were incorporated with the parietes of the cyst.* There was a large quantity of blood, partly fluid and partly coagulated, effused into the abdominal cavity; Madame la Chapelle, Prat. Accouch. tom. iii, p. 147.

A woman aged thirty-five, of a most amorous disposition, was, while receiving the embraces of her husband, of whom she was passionately fond, much agitated by the unexpected entrance of some person into her apartment. The menses had been last seen the end of September 1815, and she died January 20, 1816. The uterus was double its unimpregnated size, lined with decidua, which structure was not open either at the commencement of the uterine tubes, or at the cervix of the organ. *A delicate vascular mass, resembling a placenta, adhered to the left ovary,* and in the pelvis was a cyst containing a foetus of six months and a little water; Nuov. Journ. de Med. vol. ii. p. 320.

In a subject procured for dissection, on the right side of the uterus, commu-

sultation took place, consisting of the moderate number of eleven medical men,—of whom four, including myself, are graduates of Edinburgh. As usual in such circumstances in this country, where, in general, many other persons besides professional men are present, there was a great display of erudition, without much sound practical principles or knowledge; and an abundance of information from French authorities regarding the success of their operations in such cases. Fortunately for the poor woman, however, common sense gained the ascendancy; and it was decided by a majority of *only one*, that dame nature should be left to herself, without having recourse to the more learned of her assistants. The result has proved that the decision was right, for the woman is now restored to health. All the particulars regarding the history of the case, since the consultation, and the progress of the woman's recovery, which I have been enabled to obtain, are the following, viz.—that the patient continued in a very

nicating with the corresponding ovary and tube, a cyst of placental structure was discovered, containing within its membranes a foetus which measured eight and a half inches in length, and weighed rather more than 3½ lbs. The uterus also was found to contain an embryo of 3½ lbs. in weight, and of five and a half inches in length; Nuov. Journ. de Med. vol. iii. p. 288.

A woman seven months pregnant submitted to an incision being made through the vagina, but both parent and child died shortly thereafter; Nuov. Journ. de Med. et Chir. vol. iv. p. 172.

A woman of colour, aged twenty-one, low in stature, conceived in April 1819; catamenia suppressed, frequent vomiting; in fourth month foetal movement; December, pains resembling those of labour, and in three days foetal movement ceased. On examination, *cervix uteri found undilated, high in the brim, and pressing against the pubis*. By an incision through the abdominal parietes, a putrid foetus was extracted, and the patient died eighteen days thereafter. *The left tube was involved in the envelope of the fœtus*, an ulcer of an oval shape on the left side of the uterus, the parietes of the organ in other respects healthy, and its cavity lined with a membrane; Nuov. Journ. de Med. et Chir. vol. x. p. 500.

In the Archiv. Gen. de Med. vol. xvii. p. 344, is related the dissection of a case of extra-uterine gestation, in which a well-formed foetus was found in the abdomen, and a placenta so thin as to be considered membranous, furnished with exceedingly small blood-vessels, and adhering to the stomach, liver, intestines, mesentery, mesocolon, and the abdominal parietes.

December 1817, a young woman died, who was supposed to be sixteen months pregnant with her third child; she had, from the time she conceived,

indifferent state of health for many months, much emaciated, and with symptoms of irritative fever; that at length a sanguineo-purulent discharge per vaginam took place, and continued for a considerable time,—how long, or the exact nature of the matter discharged, I do not know, but in all probability some months, when it gradually diminished; and I understand that her health is now perfectly re-established.

JOHN LOUDON.

Elizabeth Purves, aged thirty, unmarried, tall, and well-formed, was placed under my care by Adam Messer, Esq., Fellow of the Royal College of Surgeons, towards the close of February 1837, when she considered herself seven months advanced in her second pregnancy. She stated that the catamenia had recurred regularly, and that she had become anxious regarding herself, in consequence of these discharges having become unusually profuse. I suspected an implantation of the placenta,

occasional uterine discharges, and pain in the lower part of the abdomen; and she was impressed with the belief that foetal movement had continued till the thirteenth month. In the tenth, motion was sometimes felt in the right, and sometimes in the left side, but thereafter, in the left side only. On opening the abdomen, a large oval body, inclined to the right side, and extending from the hypogastric into the epigastric region, presented itself, containing a female foetus, enveloped in its membranes, which, as well as a placenta of the ordinary size, were in a state of decomposition. The uterus was healthy, the left tube entirely obliterated, the uterine extremity of the right tube, to the extent of about two inches, much dilated; the remainder of this last canal was obliterated, and its surface continuous with the cyst; the left ovary was healthy, the right destroyed by inflammation; Journ. Complement. vol. vi. p. 257.

X. Y., a matron aged thirty, April 16, 1818, pain and tension of the abdomen, listlessness, anxiety, accelerated respiration, and rigors. Catamenia regular, and, therefore, considered herself not pregnant. She had been in child-bed two years previously. She expired on the 20th, and was examined twenty-four hours afterwards, when an ovum, of which the cyst was formed partly by the *right* tube, and partly by the *left ovary*, was discovered, containing a male embryo three inches long. There was a large quantity of sero-sanguineous effusion in the abdomen; the uterus was enlarged, but there was no decidua, and the cervix was elongated, and filled with concrete mucus; Med. Chir. Rev. Lond. vol. i. p. 299. 1818.

A woman who had been four days in labour, and exhausted by her efforts, but in whom *no os uteri could be traced*, though the head of a foetus was easily

but though repeated examinations had been made per vaginam, *no os uteri could be discovered*. Of the woman's pregnancy no doubt could be entertained, as, independently of other unequivocal signs, different parts of the fœtus could be traced through the parietes of the abdomen. It was now thought, that, during the previous months the os uteri had been obliterated, as had happened in other cases which had formerly occurred in my practice; and, as had also taken place in those instances, that the aperture might dilate during parturition. Another unusual circumstance in this case was, the impossibility, without causing excessive pain, of passing a finger through the brim of the pelvis, in consequence of its being so completely occupied by what was then deemed to be the gravid uterus. From the period we commenced attendance, the patient was occasionally much harassed with tenesmus, diarrhœa, and for the greater part of one night severe pain in the epigastric region, returning at short intervals,

felt, was delivered by an incision five or six inches backwards and downwards through the posterior wall of the vagina. Liquor amnii escaped, and the hand was passed into the cyst to extract the fœtus, which, however, could not be effected, though the abdomen was compressed by an assistant; but *extraction was ultimately accomplished by forceps*, and although the child, when born, was asphyxiated, it was, nevertheless, resuscitated. The operation was attended with little hemorrhage, and scarcely any pain; and in two weeks, the woman was going about, and no traces of the incision could be discovered per vaginam;—*an American case*; Med. and Surg. Review, vol. ii. p. 132.

A married woman, aged thirty-three, the mother of three children, was repeatedly seized, in the end of 1819, with menorrhagia; and more especially in October, about a month subsequent to her having felt foetal movement. 26th, indications of premature uterine action, after she had suffered personal violence, and the motions of the fœtus were not thereafter perceived. November 2d, labour pains, which subsided on the 6th; and though the head of the fœtus was to be felt, yet no os uteri could be discovered. From the 4th to the 8th, a plentiful secretion of milk; and on the 20th the patient died. *Dissection*.—extensive peritoneal adhesions, effusions of lymph and serum, a fœtus of eight months' growth in a cyst, which, on attempting its separation from the ambient parts, was lacerated, and contained a small firm placenta, but which was quite detached from it. The uterus was enlarged, the left tube could be traced a certain distance upon the sac, in the structure of which it was ultimately lost, and the corresponding ovary could not be found; Dr. Ingleby's cases, Med. and Surg. Journ. Edin. vol. xlii. p. 353.

which symptoms experienced varied relief from the use of opiates, local and general blood-letting. On the night of those pains she described the struggles of the fœtus as having been violent; and soon after this period the mammæ became less tense, and the tumidity of the abdomen diminished. From the patient being constantly bed-fast, and the influence of constitutional irritation arising from the foregoing complaints, her health began to decline; and as the os uteri could not yet be felt, I was undecided whether to consider the case as one in which the uterus had been ruptured, and its contents ejected among the abdominal viscera, an example of extra-uterine conception, or one of retroversion of the uterus; which latter opinion, from circumstances immediately to be noticed, appeared the most feasible. In this uncertainty, Mr. Messer and myself were joined in consultation by Mr. Zeigler, surgeon. It was now ascertained that, when rather better than three months pregnant, the woman, after active exercise at the

A woman aged thirty, when at the close of pregnancy in 1821, felt something give way within, which sensation, however, was neither followed by expulsive efforts nor reduction in the size of the abdomen. Eighteen months thereafter, she became pregnant again, and was delivered of a living child; two years after this last delivery, she produced a fœtus of six months; and in 1826, one of seven months. In May 1827, she entered the Cork Street Fever Hospital; an ulcer formed on the right side of the umbilicus, which on the 9th June was so much enlarged, that the body of a mature fœtus could be discovered and extracted; and four days afterwards the woman died. On the right side of the uterus, containing much pus, a *large cyst* was discovered, with which the corresponding tube was confounded; but on the left side the uterine appendages were natural; Med. Chir. Rev. vol. x. p. 223.

A matron aged twenty-eight, after producing one child in 1815, some weeks prematurely, conceived again six years thereafter. An effusion of blood per vaginam, when seven months advanced in the present gestation, and no fœtal movement thereafter, and no change in the size of the abdomen, which was most prominent towards the left side. At the close of nine months, pains like those of labour, which continued four days, and the catamenia returned. An abscess formed below the umbilicus, which, after bursting, was dilated, and the bones progressively extracted; Med. and Phys. Journ. Lond. vol. xlix. p. 311.

October 1821, a woman aged thirty-three, who, from the menses being irregular, did not suspect pregnancy, and continued her customary occupation of carrying heavy loads on her back. From time to time she was obliged to relinquish this employment, in consequence of abdominal uneasiness resembling

washing-tub, was suddenly seized with much pain and difficulty in voiding urine, with frequent desire to use the night-table; which symptoms were considered by a gentleman who was then called, as arising from some inflammatory affection; and, upon this supposition, the patient was bled both generally and locally. From her more aggravated complaints having commenced at the period at which retroversio uteri usually happens, and many of her symptoms being such as characterise that accident, we now felt the more disposed to adopt this view of the case. The woman suffering considerably from general uneasiness of the abdomen, and occasionally vomiting, sunk on the evening of the 6th May; having, on that day, by her own account, exceeded the usual term of pregnancy three weeks. Though, from the protracted irritation, and the abdominal tumour having latterly evidently subsided, there was every reason to believe that foetal life was extinct, yet, to be satisfied on this point, Dr. Spittal, Lecturer on the Practice of

colic or peritonitis, accompanied by fever. It was at last decided that she was pregnant, and owing to abdominal pain and slight dilatation of the cervix uteri, abortion was apprehended. Some coagulated blood was now passed, and the uneasiness subsided for a few days, when the peritonitic symptoms recurred. Retroversio uteri was next suspected, to relieve which a trocar was passed per vaginam into the uterus, but very little fluid escaped. At last a tumour was discovered towards the posterior and left side of the pelvis, and in the rectum a perforation, which was enlarged, and a *fœtus extracted by the crotchet*. February 20, 1822, the patient died, when a body as large as the head of a mature child was seen somewhat inclined to the left side, forming adhesions with the uterus, sigmoid flexure of the colon, and omentum. There was *no trace of tube or ovary*. The cyst was of a fibrous texture, and contained a little sanguineous pus; Bonnie, à Paris. 1822.

A healthy female advanced to the conclusion of her third pregnancy in November, when pains resembling those of labour supervened, followed by the discharge of a fluid tinged with blood from the uterus, milk fever, and abundant secretion in the breasts, and in December, the catamenia. In August following, this last secretion ceased, and a whitish yellow fluid was substituted. After a variety of suffering, the whole of the foetal bones were evacuated per rectum, in July, the third year of the gestation; Med. and Phys. Journ. Lond. vol. xlix. p. 353.

March 1823, a matron aged twenty-eight, produced, in 1815, a child of eight months' gestation, and conceived again four years after this last birth. About the month of June 1820, when seven months advanced in her second preg-

Physic, carefully examined the abdomen with the stethoscope a few hours before dissolution, and neither the pulsations of the foetal heart, nor the placental sound being audible, no attempt was made to emancipate the foetus.

Dissection.—Twenty hours after death, Mr. Fergusson, Lecturer on Surgery, and Surgeon to the Royal Infirmary, conducted the examination of the body in the presence of Messrs. Messer and Zeigler, surgeons; Mr. George Thompson, my assistant, and myself. A well formed areola surrounded the nipples, and the breasts were large. The abdomen was much less distended than it is usually found at the termination of pregnancy. On dividing and reflecting the parietes of the abdomen, the small intestines increased in vascularity, and slightly cohering by recently formed lymph, were brought into view; as also a large oval flattened body, of a colour varying at different points from light to dark blue, and occupying the

nancy, foetal movement ceased. In February 1823, an abscess, which had formed at the umbilicus, was dilated, and betwixt this date and September 15, all the bones of the foetus were extracted, and the patient recovered. In the beginning of this last month, the catamenia, which had been suspended nearly five months, returned, while a fluid resembling this secretion was, at the same time, discharged from the wound. April 1826, she still continued to menstruate both by the fistulous opening and per vaginam; Med. and Phys. Journ. Lond. vol. lviii. p. 314.

A woman aged twenty-four, in the third month of her fourth pregnancy, from the occurrence of pains, was apprehensive of abortion; tumour in the tract of the rectum, *uterus pushed towards the os pubis, and felt empty*: extra-uterine pregnancy consequently suspected. There was abdominal uneasiness, nausea, and fearful faintings. Motions of the foetus obscurely felt; *uterus elevated towards the crest of the right ilium*. After a consultation, 27th Brumaire, an. 8, case considered one of extra-uterine conception. A few days after this, abdominal pains, sanguineous discharge per vaginam, and the expulsion of a body resembling a mole, the size of a clenched hand. *Mois de ventose*, she evacuated per rectum some sanguineous mucus, followed by a considerable quantity of pus; and on one occasion some of the bones of the foot were discovered in the excreta. 1st Floreal, an. 9, portions of the integuments and a whole foot passed. 20th Floreal, the remainder of the foetus, which seemed to have attained maturity, was extracted; and on the 28th the patient died of a severe fever. The cyst, which is said to have been formed by the right broad ligament, adhered to the omentum, some portions of the intestines, and descended in the pelvis to

umbilical, lumbar, and iliac regions of both sides, and likewise the hypogastric. The whole surface of this body exhibited distinct traces of inflammation; over its superior and anterior parts the small intestines descended, and slightly cohered to the cyst, to the extent of about three inches. Immediately above, and on the right of the symphysis pubis, firmly adhering to the anterior surface of the cyst, but not covered by the intestines, nor by any other abdominal viscus, the uterus, about twice its unimpregnated size, presented itself; its structure was sound; its blood-vessels manifestly enlarged; but its cavity exhibited no evidence of decidua. Both the uterine tubes were obviously enlarged, and the right one more so than the left; and the fimbriæ of each could be distinctly traced, but nearly all those of the right were incorporated with the cyst. The round ligaments also, were larger than they are observed in the unimpregnated state. To the body formed by the cyst and its contents, and pursuing their usual course,

within three inches of the anus. The extremity of the right tube was obliterated, and the uterus somewhat enlarged; but the other pelvic viscera presented nothing remarkable; Bonnie, à Paris. 1822.

A lady aged thirty-four, in 1823 painful micturition, lumbar and hypogastric uneasiness, and vaginal effusion. May 1824, transient nausea, cessation of morning sickness, tension of the mammæ, recurrence of the catamenia for a few hours, followed by sanguineous discharges. August 5, after some exertion, profuse vaginal effusions, with severe vomiting and other formidable symptoms. On examination per vaginam, besides various morbid alterations of the uterus, the organ was found of the size it might have been expected to attain after a gestation of two months, its cervix elongated, and extending to within an inch of the os externum, and the abdomen exquisitely sensitive. In this stage, disease of the uterus and ovaries, and retroversion, were suspected, and, September 12, the patient died. On dissection, besides about three pints of blood and serum, a fetus of three and a half months was found among the convolutions of the intestines, which had burst from a cyst the size of a fist, placed between the cœcum and rectum. *This cyst originated from the right ovary*, and was lined with a membrane resembling the amnion, and the uterus also was furnished with decidua; Med. Chir. Rev. vol. vi. p. 618.

A woman aged thirty-nine, first gestation, conceived February 1825; after the commencement of the second month she received a sudden shock owing to a fall, which was followed by uterine effusion that continued three weeks, when pains like those of parturient action, with frequent desire for micturition, supervened; and a tumour was felt in the left side of the abdomen: the pains sub-

the left tube and both the round ligaments intimately cohered; but the right tube ascended obliquely in the corresponding side of the abdomen, upon the surface, and nearly to the upper part of the cyst. Both the ovaries were of unusual size, especially the left; and the right contained the remains of two corpora lutea undergoing morbid changes by the deposition in their cavities of tubercular-looking matter. The right ovary was flattened and situated on the inner surface of the cyst. The abdomen contained about six ounces of purulent effusion. On examining the body so frequently alluded to, it proved to be a cyst containing a small female foetus, eight or nine months growth. In its structure, the cyst was somewhat pulpy, easily lacerated, and varying from a quarter to half an inch in thickness, composed apparently of the cellular tissue external to the peritoneum, forming successive layers. The foetus, exhibiting considerable marks of decompo-

sided, but she continued indisposed till the middle of the seventh month, when they returned with great violence, and were accompanied by distressing nausea; a tumour was now perceived in the right side of the abdomen, but the *os uteri* could not be felt. In November the pains subsided, and in January 1826, the catamenia reappeared. August of the same year, she began to discharge blood per anum: between October 1827 and January 1828, she passed, in the same direction, all the bones of a foetus of six months; and in March she was so far recovered that medical attendance was discontinued; *Lancet*, 1830-31, vol. xxxi. p. 702.

A matron, aged thirty-five, seven months advanced in her ninth pregnancy, felt no foetal movement after having gone a short distance in a passage-boat on a canal, on the 6th July 1826. Pains resembling those of labour commenced in the passage-boat; but there was no uterine dilatation, although the efforts at expulsion had continued during the following day, with some hemorrhage; on the 24th August considerable emaciation, abdomen much diminished in size, and an induration perceptible within: on the 25th and 26th all the bones of a foetus had been extracted per vaginam by a polypus forceps; and on the 1st October the patient was in perfect health; *Med. and Surg. Journ.* Ed. No. xci. p. 302.

S. L., aged thirty-seven, when three months advanced in her fifth pregnancy, felt, during unusual exertions, as if something bad given way within, followed by sanguineous vomiting, and a discharge of a similar nature per vaginam; this happened September 1827, and on the 14th February following she died much emaciated; abdomen contained about four or five pints of sero-sanguineous fluid; peritoneum inflamed, uterus enlarged with its aperture above and to the left of the pubis; foetus small, enveloped in its membranes, and situated betwixt the intestines and the uterus, principally in the umbilical and left lumbar regions;

sition, was placed in a sitting position, its face resting upon the lumbar vertebræ, the spine directed towards the pubis of the parent, and the breech occupying the brim and a considerable part of the pelvis. A placenta and membranes, much decomposed, were found in the cyst; the mass was only about the volume of a placenta of the ordinary size, *adhered to the inner surface of the cyst, nearly opposite the fimbriæ of the right tube*, and was separated from the foetus in consequence of the funis, which was only five inches in length, being torn near its middle; the cyst also contained a few ounces of turbid fluid, the remains, probably, of the liquor amnii.

For the following case I am indebted to Dr. W. J. King, physician, Bridge-Town, Barbadoes; a part of the cyst with the organs connected with it, have also been forwarded to me, and the pathological description of these structures given by

the ovum was enveloped in an adventitious cyst three lines thick; the placenta was unusually expanded, five inches in thickness, and five pounds in weight; the uterus was about the size of that organ *in the fourth month of pregnancy*, and its appendages were distinct, except *the right ovary, which could not be found*; Med. Phys. Journ. Lond. vol. lix. p. 337.

In a woman, aged seventy-three, a tumour adhering to that portion of the mesentery which fixes the lower extremity of the small intestine, was found to contain a perfectly ossified foetus two inches in length; Archiv. Gen. de Med. vol. xvii. p. 297.

A young woman, who had been knocked down and ill treated, shortly after marriage, soon thereafter found herself pregnant; and at the time her delivery should have happened, the pains went off without any result; after some months she was seized with acute intermitting pains in the abdomen, groin, and anus; on examination a foetal bone was found in, and extracted from the rectum, with great relief. This happened in 1829; she remained quite well until 1834, when she again became pregnant, and after some time, passed the fragments of this second foetus also per rectum; but in this instance, there was neither pain nor constitutional disturbance; Brit. and For. Med. Rev. No. xiii. Jan. 1839.

A matron, aged twenty-six, second gestation, suffered unusually from abdominal uneasiness during nearly the whole of her pregnancy, which commenced January 24, 1830. In October following she had sanguineous discharges per vaginam, followed by watery effusion resembling the liquor amnii, and thereafter something like lochia, which, in a few days, was succeeded by milk in the breasts, and in December the catamenia reappeared, and continued four months; in July 1831, diarrhœa, pus, hemorrhage, and foetal bones per rectum; and after twenty-one months, she recovered; Med. Gaz. Lond. vol. xiv. p. 830.

Dr. King, strictly corroborated by Dr. Knox, and other friends, by whom the preparation has been examined since it came into my possession.

A free negro woman, aged about thirty years, on the 26th July 1837, when in the beginning of the eighth month of her second pregnancy, had a sudden protrusion of the *cervix uteri*, in consequence, as was supposed, of lifting from the ground and conveying to her head, without assistance, a vessel containing four or five gallons of water. The protruded part projected about three inches beyond the *os externum*; was nearly an inch in diameter, of a pale red colour, glossy, and painful when pushed into the vagina, which could be easily accomplished. The *os tincæ* was open, and a female catheter could, in *its entire length*, be readily passed into the uterus without the patient being conscious that any thing was being done to her. In the middle of the ninth month the abdominal tumour was affected with constant pain, greatly aggravated on pressure, followed by fever, and frequent vomiting. These complaints were only mitigated from time to time by occasional abstractions of blood and other appropriate remedies; and in about a fortnight, the woman died: by her mother's account, she was conscious of foetal movement almost to the last day.

Dr. King examined the body the following day, in the presence of Dr. W. Clarke, resident physician, and Dr. W. J. Evans, author of *Endemic Fevers of the West Indies*, both of whom assisted

June 11, 1835, a woman of colour, aged forty, and the mother of five children, had for nearly four years occasional abdominal pains, and a hard swelling in the right hypochondrium; she continued her labour as an apprentice until within the last three months, and except once the catamenia had not been obstructed; when the narrator of the case saw the patient, there was projecting from an opening rather to the right, and a little below the umbilicus, a dark-coloured, foetid mass, which, on being extracted, proved to be a foetus of five months; the patient had perfectly recovered when the case was published in the *Jamaica Physic. Journ.*, December 1835; *Brit. and For. Med. Rev.* vol. iii. p. 522.

A patient aged thirty-five, the mother of six children, became an inmate of the Dublin Lying-in Hospital, August 31, suffering under very formidable symptoms. She always enjoyed good health until five weeks previously, when she had been exposed to some mental emotion, which was followed by abdo-

in the examination. The abdomen, as to feel, size, and form, resembled that of other females in advanced pregnancy; on dividing its parietes, a sac containing a full-grown female foetus, presented itself; the cyst was large, and generally so attenuated, more especially in its fundus, and so disorganised in its structure from the effects of inflammation, that it was with difficulty any portion of it could be preserved. To the upper part of the interior of the cyst there was a firm adhesion of the placenta, which was much expanded, very thick, and as dense as a hepatized lung. Several pints of dark-coloured fluid were contained in the cyst; which last adhered to the anterior surface of the uterus and broad ligaments, by a thick false membrane. The large omentum, as also portions of the posterior surface of the bladder, which, naturally, were in apposition, adhered to the fundus of the cyst; as did also the appendix vermiformis. The uterus, pushed to the right side, was nearly six inches in length, and four in breadth; and its parietes were at least three quarters of an inch in thickness; but no part of the organ protruded beyond the os externum, nor was there any decidua in its cavity; the right ovary was distinct, and the corresponding Fallopian tube pervious; but *on the left side these organs were lost in the structure of the cyst.* Apparently, the foetus seemed to have been dead some days. The ovulum must have been lodged in the left ovary, and after its foecundation been deposited betwixt the uterus and the bladder, which latter was consequently placed between the anterior surface of the cyst and the pubis.

minal and lumbar pains, bearing down efforts, and frequent desire for micturition. A tumour was quite perceptible, both by the application of the hand upon the lower part of the abdomen, and by examination per vaginam, whereby the uterus was pushed towards the pubis. She died the 3d of September, and had not menstruated since the period of her preceding delivery, which had happened fourteen months previously. A quantity of blood was effused among the intestines; the pelvis was filled with coagula, among which an embryo of two months, attached by its funis to the interior of a ruptured cyst, somewhat larger than an orange, was discovered. Unfortunately, this sac would seem to have been removed from the pelvis before its organic relations had been examined, for there is no mention made whether it had any connexion with the uterus or any of its appendages. The uterus was somewhat enlarged; Med. Gaz. Lond. vol. viii. p. 382, from the Dublin Med. Trans. New Ser. vol. i. p. 118.

TUBAL GESTATION.

Cases of this description, as already remarked, are the most frequent of all the varieties of misplaced gestation. From the numerous examples of this nature that have been recorded for the last century, it may naturally be inferred, that such cases must have occurred in remote ages, though, as the sex were more simple in their habits, and their system was consequently less vitiated than in females of modern times, deviations of this nature must then have been much less frequently met with than at a more recent period of our history. When it is considered that the floating extremities of the Fallopian tubes, into which, in a natural gestation, the product of conception must enter, are so contracted, that they can scarcely receive the point of a surgeon's probe; and that these channels progressively become narrower from their fimbriated to their uterine extremities, which, in the healthy state, cannot admit a thicker object than a hog's bristle, the occasional arrestment of the ovulum in these canals cannot be matter of surprise. It will not, of course, be denied, that these organs, like other structures of the body, are subject to morbid mutations, by which their calibre may be diminished; but as these points will be more appropriately considered under the general head of causes, I will dwell no longer on them at present.

Riolanus, the younger,¹ and not Rinthelius and Tilingius, in 1670 and 1671, as has been incorrectly stated by Professor D. D. Davis, published the first well attested cases of Tubal Gestation. The cases of Riolan occurred in 1604 and 1638. Examples of this variety must also have been met with by Mauriceau and Dionis in the latter half of the seventeenth century, as would appear from the writings of the latter.²

¹ *Vide* page 6 of this Memoir.

² Ce n'est pas seulement dans les trompes qu'il se peut former des enfants, mais encore dans la propre substance de la matrice. Deux histoires remarquables nous font voir que cela se peut. M. Mauriceau en a été témoin d'une, et je l'ai été de l'autre. M. Mauriceau est mort sans avoir jamais voulu se rendre sur l'opinion des oeufs; mais ne voulant pas croire que ce fut un oeuf qui se

Benoit Vassal, a surgeon of Paris, in opening the body of a female, aged thirty-two, and who had previously born eleven children, discovered what he himself and others considered a double uterus; but which, as De Graaf afterwards very properly inferred, must have been a case of tubal pregnancy. In his account of it, published at Paris in 1669, Vassal informs us that the eleven births were followed by a brother, yet a foetus, procreated in an adjunct uterus; where, for two months and a half previously, it had caused to the parent very distressing symptoms, which between the third and fourth month terminated in convulsions that continued three days, and then proved fatal. The embryo was discovered to have burst from its cyst of the right tube, and to have occasioned a copious effusion of blood into the abdominal cavity.¹ Professor Davis, of the London University, refers to the cases of Bayle and Cyprianus,² as instances of Fallopian tube gestation; but as in one,³ at least, of those related by Bayle, it is particularly stated that the uterus, tubes, and ovaries were quite distinct, that the foetus weighed eight pounds, and that it had been retained from 1652 to 1678, I should scarcely have expected that a modern pathologist could have betrayed so much credulity as to admit, that the structure which had originally surrounded the ovum could have been unfolded, however accurately examined; since, from the chronic excitement unavoidably induced by the pressure and protracted retention of so large a body, the ambient structures must have been incorporated with the foetal cyst.

soit arrêté à l'extrémité de la trompe, et qui s'y soit germé il falloit du moins qu'il nous fit voir comment la semence de l'homme pouvoit avoir pénétré la substance de la matrice pour y produire un enfant et former cette poche qu'on a trouvé. On convient avec M. Mauriceau, que la poche en question est fait, d'une partie de la substance de la matrice; mais aussi il falloit qu'il convînt qu'elle s'étoit formée à l'extrémité de la trompe, et que la matière dont l'enfant y-a-été engendré y a été portée de l'ovaire par la trompe; Dionis, *Traité d'Anatomie*.

¹ *Miscell. Curios. An.* 1670, Obs. 110, p. 257; also *Mem. Acad. Roy. des Sci. An.* 1702, p. 400.

² *Obstet. Medicine*, vol. ii. p. 922.

³ *Journ. des Savans*, An. 1678, p. 305.

It is very questionable how far the case recorded by Cyprianus should be considered one of the tubal variety, though viewed by Professor Davis in this light. The narrator states, that, by an incision through the parietes on the right side of the abdomen, where, two weeks previously, an ulcer had formed, he immediately exposed a foetus of the proper size, which was contained in the right Fallopian tube. It is almost unnecessary to observe, that, in the living subject at least, it would be utterly impossible to distinguish the Fallopian tube when distended to an extent sufficient to contain a full-grown foetus; and that, moreover, it is exceedingly doubtful whether, while the patient was groaning and bleeding under the knife, any operator could have the self-possession to grope among the viscera, and in succession examine each structure so minutely as to enable him to decide upon that which originally constituted the cyst of the foetus. There is no reason, however, to doubt the occurrence of the case in question, although no one capable of reflection would undertake to say that it was of the tubal variety; and it is highly interesting, in as much as it may be considered among the earliest on record, in which, under the circumstances, the foetus had been removed by the section of the abdominal parietes with ultimate success to the parent, although, as we are informed, each practitioner in attendance was afforded an opportunity of introducing his hand into the abdominal cavity of the patient; whence, after the section of some structure in the interior, a foetus and placenta were extracted.¹

An interesting example of the tubal variety is related by Littre, who states, that, in February 1701, he was called to a female whom he found in extreme suffering, accompanied by cold perspirations, pale countenance, interrupted breath-

¹ Admonitioni meae de sectione faciles prae-buit aures; omnibus-que paratis abdomen a latere dextro aperui, tunc foetus intra cavitatem tubae dextrae Fallopianae illico in conspectum venit isque justae magnitudinis. Exinde sensim indies agra melius se habuit, vires etiam acquirens. Prostremo ne quidquam desit casui huic extraordinario, prostridie Kalendis Januarii 1696; filiam feliciter peperit, iterumque subsequente anno 1697, gemellos filium et filiam enixa est; Epistola ad Thomam Millington!

ing, excessive pain, with tension and tumefaction of the abdomen, especially towards the left hypogastrium, and constant retching. Though in a state of great prostration, she was quite sensible. She was the mother of five children; and in this gestation, when six weeks obstructed, she fell upon her knees, which accident, in six hours afterwards, was succeeded by the symptoms enumerated; these continued forty-eight hours without intermission, when death ensued. On dividing the abdominal parietes, blood in large quantity issued with rapidity from the cavity, which was supposed to contain four pints. The left Fallopian tube was lacerated about five lines from its fimbriated extremity, and contained an ovum an inch and a half in diameter, whose membranes were distinct, and inclosed an embryo.¹

Santorinus relates a fatal example of laceration of the left tube, in which the patient died nine hours from the commencement of her sufferings.²

¹ *Memoires de l'Acad. Roy. des Sci. An. 1702, p. 277.*

² *Mulier tres supra triginta annos nata, sex filiorum mater, cum capitis quidam affectu laboraret, suppressa sibi menstrua animadvertit quinque adeo mensibus in eo mansit ut, extremo hoc tempore, diros circa pubem et femora potissime cruciatus passa esset, simul cum virium languorē et vomitione; post novem circiter horas mors tandem occupat. Cadavere aperto sinistram uteri tubam in magnum tumorem distentam comperimus, lateribusque tubæ diductis, in ea quidpiam placentæ simile invenio, membranisque remotis nostris oculis fœtus sese exhibuit; Santorini Obs. Anat. chap. xi. obs. xvi. p. 225. 1723.*

The following authorities and works may be consulted regarding Tubal Gestations.

A woman aged twenty-three, after a fall from the fifth floor of a house, was conveyed to the Hôtel Dieu of Paris, where, five weeks and five days afterwards, she died of a fever. Nothing discovered in utero, but in the right Fallopian tube, a tumour containing fœtal bones; 1689. The same writer found, in the body of a woman opened at Salpêtrière, in 1694, a fœtus in the left tube; *Mem. de l'Acad. des Scien. 1702, p. 398. Hist. d'une Grossesse, extraord. à Paris. Thomas Bartholinus, de insolitis partus viis, p. 74.*

A woman aged thirty-three, regularly menstruating, voided the bones of a fœtus of five months, per anum, and died. The right tube contained the ovum; Guala, *Boehmerus, Fas. 1, p. 19.*

Fœtus in the right tube nine months, extracted in a state of decomposition, by gastrotomy. Patient died the eleventh day after the operation; Paul B. Calvo, *Hist. de l'Acad. Roy. des Scien. 1714, p. 29.*

In a case of this variety, the extremity of the right tube formed a part of the

The following case is interesting, both on account of the situation of the patient, and the protracted retention of the foetus. Madame C., aged forty, conceived eighteen years after marriage. Soon after the commencement of pregnancy, she was seized with pains in her left side, which were relieved by appropriate remedies; and at the close of the second month, they subsided altogether. About this period her husband died, leaving a large inheritance, to which, in the event of there being no issue, his brother would succeed. This individual, to prevent his being deprived of the estate by a supposititious heir, sent persons to watch the patient: they presented themselves about the time labour had commenced; and uterine action consequently subsided. During the following month, which was her tenth, the pains were merely occasional and slight; and, finally, these and foetal movement ceased altogether. The health of the patient declined daily, and on the

cyst, and this canal became so much dilated, that the placenta, in a state of decomposition, passed through it into the uterus, and was discharged per vaginam; Deizemeris, from *Bianchi de Generatione*; 1714.

A married woman, aged thirty-two, foetus in the left tube, whence, after occasioning various gastric, intestinal, and uterine derangements, it burst in the fifth month, and the patient passed bones for the five following months, and survived their total expulsion three months, when she died; *Bianchi de Natura in Humano Corpore vitiosæ morbosæque generationis*.

A woman aged forty, produced twins, and fifteen years thereafter, in consequence of the irritation of a tumour in the abdomen, she died, when the bones of a foetus of three months were found in the right tube. Had this woman conceived of triplets? *Hist. de l'Acad. Roy. des Scien.* 1722, p. 27.

A woman aged thirty-six, twelve years married, and the mother of four children, died from hectic fever, arising from a variety of organic lesions, as scirrhus of the left breast, disease of the liver, and of left kidney. In the right tube was found an embryo of three months, which had neither anus nor external genitals; *Act. Acad. Nat. Cur.* vol. v. obs. 152, p. 511. 1739.

A woman in her fifth month of pregnancy, had such feelings as induced her to think that foetal life had become extinct; and the foetus was afterwards voided in successive portions per rectum. The patient died, and the cyst and a portion of the placenta were found in the extremity of the tube, the fimbriae of which contributed to the formation of the cyst; *Bianchi*, p. 117. 1741.

In the body of a female aged twenty-two, an ovum the size of a pigeon's egg was discovered, partially embraced by the fringes of the left tube; *Ephem. Nat. Cur.* Cent. 7 and 8, Obs. 9, p. 23.

A woman aged forty-two, had a discharge per rectum for several weeks, and

20th September 1757, seven years and a half from the date of conception, she died in a state of extreme emaciation. On dissection a full-grown foetus, much decomposed, was discovered; and was thought to be enclosed in the left tube.¹

The next case is also one in which the foetus had been retained six or seven years, and then destroyed the patient. At the usual term, pains resembling those of labour supervened, but they gradually subsided, and the health of the woman was in some degree restored. The pains recurred at three different periods, and, finally, in June 1757. Fever and diarrhoea accompanied that last attack of pains; and in the excreta were evacuated the softer structures of the foetus, with the placenta. The left tube, much thickened, containing *bones sufficiently large for a foetus of ten months*, was thought to have formed the cyst.²

The next is a case which has often been deservedly quoted

¹ Poteau *Melange de Chirurgie*, p. 383.

² *Journ. de Med. &c.*, vol. viii. p. 2.

died, when the bones of a foetus of six months were found in the right tube; *Phil. Trans.* vol. ix. p. 112. 1745.

A woman retained an extra-uterine foetus from 1731 to 1745, during which period she produced six children at maturity. Three weeks after the birth of the sixth, an opening formed at the umbilicus, through which the skeleton of a foetus was extracted; and the patient dying soon afterwards, the left tube was ascertained to have constituted the cyst of the foetus; *American Magazine*. Boston, 1746.

A matron aged twenty-eight, third gestation, five and a half months pregnant, suffering from an incipient and a violent dry cough, died after twelve days. Left tube contained an embryo three and a half inches long, uterus larger and thicker than usual; *Van der Belen, Journ. de Med.* vol. v. p. 380. 1756.

A woman aged thirty-six, who had several children, on dissection was found to have an osseo-lapideous concretion in the uterine cavity, and an embryo of two or three weeks in the right tube; *Boehmeri, Fascic. 2*, p. 13.

A woman died in the fourth month, left tube contained foetus, six pounds of blood in the abdomen; *Obs.* 1539. A married woman aged thirty, ten days in labour, a foetus of nine months in the right tube; *Obs.* 1548, *Lieutand*, 1756.

Partus tubarii per quadraginta sex annos gestati, et in vetula nonagintaquatuor annorum mortui inventi; *Baruthi*, 1722.

In a woman who, for some crime, had been sentenced to hard labour, there existed a large hernia, and a hard tumour three inches in diameter, formed by the left tube; which, on being laid open, was found to contain cranial bones,

from the respectability of the narrator, and the accuracy with which the details have been given. A married woman, aged thirty, in her second pregnancy, in consequence of a bilious complaint, to which she had formerly been subject, used some remedies she had been wont to employ, and also a warm bath. She had been obstructed but one period, and paid so little attention to this circumstance, that she did not make it known either to her husband, or to the ordinary medical attendant. May 13, 1791, the morning subsequent to her having used the bath, she was suddenly seized, without any previous exertion, with a violent pain in the lower part of the abdomen, followed by syncope, from which she soon recovered. A moderate bleeding and an opiate diminished, but did not entirely subdue the pain, which now attacked the loins as well as the abdomen, and recurred in violent paroxysms, accompanied by vomiting, yawning and fainting. On the 16th, she was some-

and those of the extremities. She lived for thirty years in this condition; and when she died in 1762, the bones in the tube were recognised for those of a fœtus of five months; Fritze, Schlegel, vol. i. p. 361.

A woman aged twenty-two, complained of pain in the hypogastric region, inability to lie on the left side, supposed to be seven months pregnant, but on examination uterus felt empty. Fœtal movement ceased, but size of the abdomen increased enormously. Fœtus, when supposed to be seven weeks dead, was extracted by an incision through the abdominal parietes, and the patient died eleven days after the operation. Left tube was ascertained to have constituted the cyst of the fœtus; Bononiensi Institut. 1767, Obs. 1532, p. 363.

On opening the body of a woman aged twenty-two, the abdomen and pelvis were found filled with blood, and the uterus the size of that organ at the close of the second month of pregnancy. There was a tumour which extended from the left side of the uterus to the corresponding psoas muscle; for about two inches from the uterus, the left tube was of the natural size, but at this point it began to dilate, and it terminated in a body, which, on being opened, was found to contain a placenta with its funis, and an ovum of about eight or nine weeks; Weinknecht, Schlegel, vol. ii. p. 246.

Dr. William Hunter is said to have met with a case of Tubal Conception, in which the uterus was enlarged and lined with decidua, but whether the right or left tube is not mentioned, nor is the size of the ovum particularized; Ed. Med. Comment. vol. i. p. 429.

A woman at the close of the third pregnancy, was seized with pains resembling those of labour, which continued two days, and were accompanied by a discharge of sanguineous mucus per vaginam. After two years, the menses became regular, and continued so for six years, when the woman died of dropsy, at the age of forty-five. A tenacious cyst containing a fœtus was found in the

what easier, but towards the evening there was an aggravation of her sufferings, accompanied by cold sweats, coldness of the lower extremities, interrupted articulation, great restlessness, with want of pulsation at the wrist, and she expired. *Autopsy*.—Nearly a gallon of blood was found effused into the abdominal cavity; a laceration of an inch and a half in length about the middle of the right tube; an embryo of the sixth or seventh week in the blood; the uterus lined with decidua, and its cervix filled up with gelatinous matter.¹

The following is an instance of a sudden fatal termination. E. Conrad, aged thirty-five, conceived for the first time five years after marriage. When in the third month of her pregnancy, a tumour of a painful nature was felt in the left iliac region. Fourteen days after fatigue from her usual avocations, and over indulgence in wine, vomiting, violent colic, with tumefaction of the abdomen, suddenly supervened, and

¹ Trans. for the improvement of Med. Chir. Knowledge, vol. i. p. 216.

abdomen, and the tube terminated in a solid spherical body; Buchner Annal. Lit. Goettin. 1786.

A foetus of five months in the left tube; Lond. Med. Journ. vol. viii. p. 347. 1787.

A woman aged twenty-eight, sixth pregnancy, when nineteen years old, gave birth to her first child, after which she had two abortions. At half-past eleven on the day she died, she was suddenly seized with violent pains in the lower part of the abdomen, and expired at nine P.M. Abdomen contained four pints of blood, centre of the left tube lacerated, woman only five weeks obstructed, ovum size of a bean, impregnated tube pervious; uterus thick, double its unimpregnated size, lined with decidua, and its cervix plugged up with mucus; Trans. Roy. Soc. Edin. vol. v. p. 189. 1800.

A female aged twenty-eight, in the third month of her sixth pregnancy, while in perfect health, was seized, without any obvious cause, with the usual symptoms, and died in the short space of five hours. An embryo of six weeks' growth escaped from the angle of the right tube; case originally published in 1801; Breschet's Memoire, Med. Chir. Trans. Lond. vol. xiii. p. 39.

A woman had a foetus in the left tube for seventeen years, during which she produced four children, and had several abortions. She died in 1802, when the bones of the foetus were found in the tube; Med. Phys. Journ. Lond. vol. xxxv. p. 281.

A woman died at the age of thirty-six, in her first pregnancy, and in the fibrated extremity of the right tube was found a *petrified* foetus nine inches in circumference, and seventeen ounces in weight. The sufferings of the woman had continued ten days, when she died; Journ. de Med. Chirurg. Pharm. &c., vol. xviii. p. 69. 1803.

she died while in a state of syncope. As her sudden demise had given rise to a suspicion that she had been poisoned, the body was examined, and the intestines found floating in blood, the left tube forming a tumour two inches long, and eight-tenths of an inch wide, and lacerated on the side next the pubis. There were found a placenta and foetus, the latter within its membranes perfectly organized. The uterus was somewhat enlarged, softened, increased in vascularity, lined with decidua, and its cervix filled with mucus.¹

In the following case, we have evidence of the interesting fact of Graaffian vesicles having been excited in both ovaries simultaneously. A woman, aged thirty-one, two years after delivery with forceps, experienced such feelings as led her to believe that she had again conceived, such as tension of the mammæ, nausea, vomiting, and suppression of the catamenia. Towards the close of the third month there was a discharge of

¹ Med. Phys. Journ. Lond. vol. xxxvii. p. 196.

A woman aged twenty-eight, died, and on dissection a considerable quantity of blood was found effused into the abdominal cavity, and a foetus of the second month: the left tube was lacerated, and contained a placenta; Journ. de Med. Chirurg. Pharm. &c., vol. xvi. p. 286. 1808.

A woman aged thirty-three, conceived of her first child March 1811, and died June following. Two wash-hand basins of blood in the abdomen, and a foetus of the fourth month, which had burst from the left tube. The uterus was neither enlarged, nor contained decidua; Med. Phys. Journ. Lond. vol. xxix. p. 448.

A woman aged twenty-six, in the third month of her second pregnancy, on the 19th September 1811, fell upon her back on a stair, and slid over several steps of it, which accident, though she was previously in the enjoyment of good health, was followed by symptoms characteristic of rupture of the tube, and she died after eighteen hours' suffering. The foetus was ascertained to have escaped from the angle of the left tube. The uterus was of the size it should be at the same period of natural gestation, and was lined with decidua; and the abdominal cavity was filled with dark clotted blood; Repert. Gener. d'Anatom. et de Physiol. Pathol. v. p. 4.

A woman aged thirty-nine, conceived for the first time in the early part of July, entered the Hôtel Dieu the beginning of September following, left this institution November 23, and in January she entered La Maternité, where it was ascertained that she was six months pregnant. February 28, after a natural labour, she was delivered of a foetus seven and a half months uterine life. She died 2d of March following, and on the right side of the abdomen, intimately connected with the uterus, was found an ovoid tumour evidently formed by the right tube, nine inches long and five in circumference, with an oblong

clotted and fluid blood per vaginam, and thereafter a considerable quantity of colourless matter. About a month afterwards she was seized with violent pains about the right pubis, which gradually increased, and assumed the character of those of labour. On being lifted out of bed to go to the night-table, she fainted, and frothed much at the mouth. The abdomen began to swell, and the surface to be discoloured, but the patient became sensible, and only complained of a sense of burning in the right iliac region, which progressively extended to the breasts. Her breathing became so laborious that she could not remain in the recumbent posture, and she expired two hours and a half after the arrival of the midwife, from whom the foregoing details were collected. The lower part of the abdomen and pelvic cavity were filled with blood; the uterus somewhat enlarged, and its parietes half an inch thick, the inner surface of the organ lined with decidua; and

aperture of three inches, through which the neck, arm, and part of the shoulder of a female foetus protruded; it was semiputrid, sixteen inches long, and furnished with a placenta and membranes; *Journ. de Med. par Corissart et Le-roux*, vol. xxiv. p. 415. 1812.

A woman of thirty, for the fourth time pregnant, and in whom foetal movement had ceased in the fifth month, died in the sixth. A foetus was found in the left tube, decidua in the uterus; and she had a sanguineous discharge from the vagina during life; *Journ. de Med.* vol. xxxii. p. 459. 1814.

A female of forty, died in the eighth week of her sixth pregnancy. The catamenia were regular until her decease; and on the night she died, there was sexual congress. The uterus was much enlarged, but not furnished with decidua; the right tube was lacerated at two points, about two inches from its fimbriae; *Med. Chir. Trans. Lond.* vol. vii. p. 437. 1815.

Madame Bovin's thirty-sixth plate beautifully represents a laceration in the left tube, with which the foetus is connected by its funis.

A healthy woman aged thirty, whose menses had been regular, died in the seventh week of her pregnancy. The right tube was pervious, and lacerated about half an inch from its fimbriae; the uterus enlarged, decidua formed, the os uteri open; and the embryo, with its involucra, and a considerable quantity of blood, were found in the abdomen; *Med. Chir. Trans. Lond.* vol. viii. p. 500. 1817.

A patient aged thirty-five, while in the third month of her sixth pregnancy, had, in 1817, without any previous cause, rupture of the angle of the left tube; the abdominal cavity was filled with blood, and the uterus enlarged, and lined with decidua; *Breschet, Repert. Gener. d'Anatom. et de Physiol. Pathol.* vol. i. p. 7.

A woman aged twenty-three, unmarried, when eight months advanced in her

its cervix, which was an inch and a half in length, filled with concrete mucus. The round ligaments were increased in thickness. An unusual number of vesicles were found in the right ovary,—some were superficial, and others were situated in the centre of the organ; and the largest of them were from one to two-tenths of an inch in diameter. Under the external membrane of the ovary was found one perfect corpus luteum, and the remains of a second; several vesicles were also discovered in the left ovary, and a cavity lined with a smooth membrane, half an inch in diameter in every direction; in this organ, likewise, there was one complete corpus luteum, and the remains of two others. The right tube formed an ovoid tumour, of which the long diameter was $2\frac{3}{10}$ inches, and the conjugate $1\frac{7}{10}$ of an inch. On the front part of this tube, dilated, was a rupture of $1\frac{6}{10}$ inch long; and the foetus was an inch and a half in length.¹

¹ Med. Phys. Journ. vol. xxxvii. p. 196.

first pregnancy, was seized, without any obvious cause, 18th June 1821, while in good health, with the usual symptoms, and died the following day. A female foetus of four and a half pounds escaped from the angle of the left tube; the placenta at its central point was only three lines thick, but it was twenty-two inches in circumference; Repert. Gener. d'Anat. et de Physiol. Pathol. vol. i. p. 8.

A woman aged thirty-six, was seized with a slight dysenteric affection, and six weeks thereafter, "*elle fut prise tout-à-coup de coliques atroces, avec prostration des forces et decomposition des traits de la face.*" She expired after some hours, and a foetus two inches long, which had burst from one of the tubes, was discovered; Nuov. Journ. de Med. et Chir. vol. i. p. 100. 1817.

Madame B. was seized with the usual symptoms, June 10, 1823, when in the third month of gestation, and she died the following day. The uterus was from five to six inches in length, four in breadth, eighteen lines in thickness, and its cavity was lined with decidua. The ovum burst from the uterine portion of the left tube; Repert. Gener. d'Anat. et de Physiol. Pathol. vol. i. p. 2.

In a robust woman, aged thirty, who died in her first pregnancy, the right tube was found ruptured near its fimbriated extremity, and its uterine extremity was impervious. The uterus was four and one quarter inches in length, its fundus three inches in breadth, its cavity lined with decidua a quarter of an inch in thickness, and its cervix and aperture filled with jelly. The ovum, which equalled in bulk a middle-sized gooseberry, contained an embryo; Med. Chir. Trans. Lond. vol. xiii. p. 51. 1823.

A woman who had been long indisposed, and pregnant for the third time, died. In the beginning of the second year of her illness, she voided bones per rectum. On dissection, it was discovered that an ovum had been contained in,

Dr. Albers of Bremen relates the following case, in which the attack and termination were remarkably sudden, and without any apparent cause. In 1820, he was called to the wife of a merchant in the third month of her pregnancy, who, though in good health, was seized immediately after leaving her bed with violent pains in the abdomen, more especially in the region of the umbilicus, in resemblance of colic. The narrator considering that there was something peculiar in the case, saw the patient again in the middle of the day. The countenance was cold, and presented a pale cadaverous aspect; there was livor of the lips, and an exceedingly small and frequent pulse. Her sufferings continued without intermission until six in the evening, when they became easier, and shortly afterwards she expired. Albers, at his second visit, recognized the nature of the accident, and imparted his suspicions to Olbers and Schmidt, who had been called into consultation. Dissection discovered a rupture in the right tube, and a small and escaped from the right tube; *Med. Repos. Lond.* vol. xx. p. 111, 1823, from *Revue Med.*

On opening a female subject, a foetus of six or seven months' gestation was found in a state of *perfect preservation* in the abdomen, where it had been contained for ten years, in a tough cyst, apparently the left tube; *Archiv. Gener.* vol. vii. p. 465. 1824.

A woman aged twenty-six, died after profuse uterine hemorrhage, and incessant pain in the left side of the lower part of the abdomen. Left tube much dilated, containing a placenta, and a foetus of two months had burst into the abdominal cavity; *Rust, Magazine, et Med. Chir. Zeitung*, 1824, vol. iii. p. 440.

A female suffering from mental distress, owing to loss sustained by her husband, died after thirteen hours' suffering. A large quantity of blood was effused into the abdomen. A perforation sufficient to receive a probe, was discovered on the posterior aspect of the right tube, which was much enlarged, and contained a vesicle half the size of a pea; *Med. Chir. Rev.* vol. i. p. 234. 1824.

A female aged eighteen, previously in good health, was found dead in bed, the abdomen full of blood, with a foetus of the fourth month, that had been contained in the left tube, which was ruptured near the centre. The uterus was larger than usual, and lined with decidua; *Archiv. Gen.* vol. x. 1825.

A woman aged thirty-eight, much enfeebled by a dysenteric affection, recognized that she had conceived. Sometime afterwards she fell, and was sensible of something having given way within, which was followed by severe pain, and cessation of foetal movement. October 1823, after a consultation, it was decided that the foetus was extra-uterine, and gastrotomy submitted to, but it proved fatal. The placenta, and a portion of the membranes, were found in the right tube, which was dilated to three inches in diameter; *Philadel. Journ. Med. Phys. Sci.* vol. i. 1825.

foetus which it had contained. The ovum had been arrested in that portion of the tube included in the substance of the uterus, whence it burst without any injury to the partition betwixt it and the uterine cavity.¹

In the following interesting case, which occurred in the Royal Infirmary of this city in 1825, and was communicated to me by Mr. Laidlaw, one of the dressers, the fatal event would seem to have been hurried on in consequence of injuries inflicted on the patient by her husband. Margaret Robertson, aged forty-two, was conveyed into the Infirmary on the 2d July, in a state of great prostration, with imperceptible pulse, cold extremities, laborious respiration, and insensibility. After the use of wine, and warm applications, she was rather revived, and complained of violent pain in the hypogastric region, and incessant inclination to vomit. The

¹ Encyclog. des Sci. Med. Février, 1837.

A woman aged thirty-four, three months advanced in her fourth gestation, and in the enjoyment of good health, was seized on the 20th July, 1825, with the usual symptoms, which induced her to enter the Hôtel Dieu, where she died the following day. The ovum in its progressive development, forced its way from the uterine extremity of the right tube into the substance of the uterus, whence it burst, without involving the integrity of the partition betwixt it and the uterine cavity. Into the abdomen and pelvis, from four to five pounds of blood were effused; the uterus was five inches in length, four in breadth, and one in thickness, and lined with decidua. The foetus was three inches and eight lines in length; *Repert. Gener. d'Anat. Physiol. Pathol. &c.*, vol. i. p. 10.

A woman aged twenty-six, in the third month of her fourth pregnancy, died after twenty-two hours' suffering; and the ovum was found to have burst from the angle of the left tube; *Archiv. Gener.* vol. i. p. 382. November 1825.

In a young woman who died suddenly, without any known cause, the abdomen was found full of blood, and there was also a tumour twice the size of a goose egg formed of transparent membranes, through which a male foetus, apparently of the fourth month, could be distinguished, and which had burst from the left tube. The uterus was a little enlarged, and lined with decidua; *Anderson's Journ.* vol. iii. p. 448. 1825.

A woman in her sixth gestation, retained the foetus twelve months; portions of it were voided per anum, and the patient died. On dissection, a foetus of eight or nine months was found in the left tube; *Archiv. Gen.* vol. xii. p. 139. 1826.

Madame ———, aged twenty-one, one month advanced in her second pregnancy, and in good health, was seized on the morning of the 31st December 1826, with the usual symptoms, and died the same afternoon. The ovum was

foregoing train of symptoms was supposed to have arisen from her having been beaten and bruised by her husband on the preceding Sunday. On the 4th she expired. The dissection was superintended by my lamented friend, the late Dr. Andrew Duncan, jun., Professor of Materia Medica. From eight to ten pounds of blood were found effused into the abdominal and pelvic cavities; the right ovary was hydatiginous, the left enlarged. A laceration of the left tube was discovered, through which a foetus of the second month had escaped. The uterus was increased in size, and ecchymosed.

Some years subsequently, Dr. Duncan, while superintending a *post mortem* examination in the Theatre of the Royal Infirmary, also discovered the following case. A female aged thirty-seven, who had been a widow for several years, and had previously produced two children, and several abortions,

ascertained to have burst from the angle of the left tube; Archiv. Gener. vol. xi. p. 170.

A young woman was suddenly affected with acute pains in the abdomen, which only ceased with her life; and in a large quantity of blood was found a foetus of the third month, that had burst from the right tube, in which there were distinct traces of a placenta and membranes; Archiv. Gen. vol. xviii. p. 106. 1827.

A woman aged twenty-two, about eight months after premature labour in the seventh month, conceived a second time; and on the 15th October was seized with abdominal pains, followed by syncope, and other symptoms of collapse, and died the same day. Two pints of blood in the abdomen; the uterus was enlarged, its cavity contained decidua, and its neck concrete mucus. The foetus burst from a cavity in the substance of this organ, at the insertion of the right tube, which could not be discovered, but the left tube was distinct; Lancet, vol. xv. p. 447, from Journ. Hebdomad.

After active exercise on the previous day, a married woman, aged twenty-five, died in her third pregnancy, 16th August 1828. An embryo was found, which had burst from the right tube; the uterus was not enlarged, but contained decidua; Med. Repos. Lond. vol. vi. p. 180.

A married female, aged forty, of spare habit, and the mother of seven children, had been kicked on the abdomen, and three weeks afterwards died, with symptoms of internal hæmorrhage. December 15, 1830, judicial inspection of the body ordered: four pounds of blood effused around the uterus, which was lined with decidua; right Fallopian tube ruptured near its uterine termination; Watson on Homicide, p. 103.

A matron aged twenty-six, who had three children, and several abortions, by a former marriage, contracted a second union in January 1830, and May following, she again miscarried; in the end of July, sanguineous effusion per vaginam,

died from the effects of disease of the heart and lungs. She suffered also from amenorrhœa, dysuria, prolapsus ani, and pain in the bowels and lumbar region. On dissection, the uterus was enlarged, its texture slightly softened, vascularity much increased, cavity lined with decidua, which firmly adhered to the organ, and seemed to be formed of recent lymph, and to be about a line in thickness; the cervix uteri contained concrete mucus, and the os tincæ was slightly dilated. About an inch from its fimbriated extremity, the left tube presented a considerable enlargement, but no breach whatever. Its tunics, on being divided, appeared incrassated; and its cavity displayed an ovum of the sixth week. Both ovaries contained a corpus luteum, and the left organ a small circular cavity filled with a broken down substance.

Koner, on opening a woman aged thirty, who, from the and severe hypogastric pain. Previously to this attack, she had passed a period, and had other symptoms of pregnancy; and from the hæmorrhage being too profuse, it was conjectured that she had miscarried. In a few days, she again recovered, so far as to be able, on the 17th August, to take much exercise, by going on a short journey, and thereafter conducting an entertainment at home. At ten next morning she was seized with the usual symptoms, and died at six the same day. About six pounds of blood in the abdomen; right tube ruptured; ovum about ten weeks' growth; uterus somewhat enlarged, and lined with mucus; the liver enlarged and unhealthy; *Med. Gaz. Lond. vol. vii. p. 11.*

In the eighth week of a second pregnancy, a married female, aged twenty-five, had the left tube burst near its centre. Four pounds fourteen ounces of blood were effused into the abdominal cavity; the size of the uterus corresponded with the period of gestation, and the organ contained decidua; *Med. Chir. Rev. Lond. vol. xv. p. 187. 1829.*

Dr. Hoden of Rouen, communicated a case in 1832, to P. Dubois, in which, in the third month of pregnancy, a patient fell a victim to rupture of the cyst, which was formed by the substance of the uterus in the tract of the tube; *Encyclop. des Sci. Med. Février, 1837.*

A woman aged twenty-eight, suffered laceration of the right tube when three months pregnant, and from three to four pints of blood were effused into the abdominal cavity; *Med. Quart. Rev. Lond. vol. iv. p. 382. 1836.*

A female, after suffering for some days, died in the thirteenth week of pregnancy. All the pelvic viscera, including the uterus, ovaries, tubes, and the greater part of the bladder, were found matted together, and concealed under a quantity of blood, which, on being removed, was discovered to have originated from a laceration of the right tube; the uterus was lined with decidua; *Obstet. Med. vol. ii. p. 932. 1836.*

A healthy female, aged thirty, six or seven weeks pregnant, was seen at half-

symptoms under which she died, was suspected of having taken arsenic, found a large quantity of blood effused into the abdominal cavity, and the extremity of the left tube of the shape and size of a pigeon's egg. In this tumour were two apertures, each sufficient to receive a pin head. On incising this cyst, an ovum containing a foetus of two months was readily dislodged. The uterus was three times as large as the unimpregnated organ, extremely vascular, and lined with decidua.¹

The following case occurred in the practice of Aug. Darby, Esq., Surgeon, Nottingham, and was communicated to me by Mr. J. H. Billing, while attending my lectures in 1837-38. It is interesting from the rapid dissolution of the patient, and the early stage of gestation at which this happened. The patient, Mrs. S. aged thirty, was seized at one A.M.,

¹ Encyclog. des Sci. Med. Fevrier, 1837.

past eleven at night, February 19, when she had rigors, excruciating abdominal pain, and tension, nausea, singultus, anxiety, hurried respiration, cold sweats, syncope, general paleness, and accelerated feeble circulation. She died before the morning, and had been complaining only about three hours before she had been visited. Left tube ruptured; uterus nearly twice its natural size; its walls thickened, softened, and reddish; its cavity lined with decidua; Med. Gaz. Lond. vol. xiv. p. 31.

An individual who was supposed to have conceived in January 1833, advanced to the eighth month without any remarkable occurrence; but at this period, pains resembling those of labour supervened, and continued three days. Three weeks thereafter, these sensations returned for a short period. In May following, there was emaciation, impaired general health, enlargement, tenderness, and fluctuation of the abdomen. Notwithstanding these unfavourable conditions, she regained considerable strength, but suddenly relapsed, and died in November of the same year. The left tube was enlarged, adhering to the illum, and formed a cavity, contained pus and bones, some of which had entered the intestine; Burns' Princip. p. 236.

Madame H., aged twenty-four, first pregnancy, two months obstructed, was seized September 17, 1836, while in perfect health, without any apparent cause, with fainting and abdominal pain, and she died in fourteen hours. From three to four pounds of blood in the abdomen; right tube lacerated; the uterus was neither enlarged nor contained decidua; Archiv. Gen. Janvier, 1838.

A woman aged twenty-eight, sixth pregnancy, experienced, after taking a walk about a month before her decease, a gnawing pain in the stomach, which continued six days, when vomiting supervened. As the catamenia were regular, the patient did not consider herself pregnant; and the morning of the day

April 21, 1837, while in the act of turning in bed, with intense pain in the abdomen, followed by a feeling of tension in that cavity, pallid countenance, profuse clammy perspiration, and feeble pulse. Local abstractions of blood, fomentations, antispasmodics, and stimulants, were ordered for these complaints, but without relief; and the patient expired in twenty-two hours from the commencement of her indisposition. She had formerly been once pregnant, but aborted, and on the present occasion she had been obstructed six weeks, and been subject to dyspnœa. The body was examined on the 24th, when about three pounds of serum were found in the right sac of the pleura; and in the lower part of the abdomen and

on which she died, she felt in better health than she had done for some time previously; but at mid-day she was seized with uneasiness and vomiting, followed soon thereafter by syncope, and at five P.M. she died in violent convulsions. The abdomen contained a large quantity of blood; the uterus was considerably more developed on the right than on the left side, and the developed part presented a laceration. The sac which contained the fœtus, was formed of the substance of the uterus, but it had no communication with the cavity of this organ; the uterine orifice of the right tube was obliterated, but that of the left was free; the ovum was about the sixth week; *Encyclog. des Sci. Med.* Fevrier, 1837.

In 1836, a case was communicated by M. Pinel Grandchamp, to the Royal Academy of Medicine of Paris, in which the uterus had acquired the same volume as if the patient had been six or eight weeks pregnant. The ovum was placed in the substance of the left angle of the uterus; the left tube, in which there was a minute aperture, the remains, probably, of a laceration, passed behind the cyst, and did not contribute to its formation; the cyst might contain a filbert; the uterine cavity was enlarged, the parietes of the organ thickened, and its inner surface lined with decidua; the left ovarium contained a corpus luteum; *Encyclog. des Sci. Med.* Fevrier, 1837.

A young female, four weeks advanced in her first pregnancy, suddenly became faint, at eight A.M., and died at six P.M.: four pounds of coagulated blood in the abdomen; left tube forming a tumour the size of a pigeon's egg, ruptured on the upper surface; uterus lined with decidua, and the cervix of the organ filled with concrete mucus.

A woman died in the course of a few hours without any phenomena, except those of exhaustion, and without pregnancy, either in this or the foregoing case, being even suspected: much blood effused into the abdominal cavity, centre of the left tube ruptured, fœtus of the tenth or eleventh week; uterus considerably enlarged, lined with decidua, and its cervix and aperture filled with concrete mucus.

A woman with violent pain in the left side of the abdomen, extreme depres-

pelvis nearly the same quantity of blood, partly fluid and partly coagulated. The right Fallopian tube, to the extent of an inch, in its course *from* the uterus, was dilated to about six lines in diameter; and a ragged oval aperture, rather smaller than the circumference of a coffee bean, was seen on the anterior aspect of the dilated portion, but no embryo could be discovered. In the corresponding ovary there was a cavity sufficiently large to contain the kernel of a small filbert, in both of these organs, several large vesicles; and in the cervix uteri, some glairy mucus.

I am informed by Professor Maunsell of Dublin, that in the Museum of the Royal College of Surgeons of that city, there

sion of the countenance, feeble pulse, syncope alternating with pains, and in eighteen hours death ensued; left tube lacerated, foetus escaped among the viscera, but maintained its connection by the funis, to the placenta, a third of which was still lodged in the tube; three quarts of blood effused into the abdomen, uterus exceeded four inches in length, and was lined with decidua, and the cervix of the organ was filled with mucus. The three foregoing cases are recorded by Dr. Inglehy in the *Med. Surg. Journ. Edin.* 42, p. 350.

In his work on Poisons, third edition, p. 107, Professor Christison relates the case of a middle aged woman who, after eight hours suffering, died from rupture of the coats of one of the Fallopian tubes which had contained an ovum; but neither the number of her gestations, age of the ovum, nor whether the right or left tube, is particularized.

A lady aged twenty-four, aborted in the third month of her first pregnancy, but in her second gestation was delivered at the natural term; conceived a third time, and seven or eight weeks thereafter died, suffering from pains, vomiting, and syncope, which had supervened suddenly. On dissection, the right tube was found to have burst; *Brit. and For. Med. Rev.* vol. iii. p. 245. 1835.

A married Bengali, aged sixteen, supposed to be dying of cholera, but without the characteristic countenance, was three days complaining when she expired. The body was examined three hours afterwards, when, besides the pelvis being filled with coagula, two wash-hand basons full of blood was found in the abdomen, and an ovum the size of a walnut, containing a small foetus, which had escaped from the right tube; the uterus was lined with decidua, and its cervix filled with mucus; *Brit. and For. Med. Rev.* vol. vi. p. 252. 1837.

C. M'R., aged thirty, when about four months pregnant of her first child, passed some coagula per vaginam, which led to the supposition that she had aborted; there was a tumour in the hypogastrium, which caused much uneasiness, and which continued of the same size as previously to the hæmorrhage; nothing could be elicited regarding the nature of the tumour, further than that it was divisible into two portions,—the larger occupied the right, and the smaller the left iliac region: the aperture of the uterus was in the same condition as if the

is a preparation of the right Fallopian tube, containing a foetus arrived at maturity, which had been retained for twenty years.

There is in the same collection a second preparation, also of the right tube, containing an embryo of the fourth month. The envelope burst, and the patient died of hæmorrhage. The uterus was enlarged, and contained decidua.

Professor Maunsell states, that within the last few weeks a case of this nature occurred in the practice of Mr. Armstrong of Dublin. The woman was twenty-six years of age, and about four weeks advanced in her second gestation, when the tube burst, and suddenly destroyed her. No cause could be assigned for the rupture.

organ itself were unimpregnated; and during the three last months, the menses were suppressed; the tumour preserved its irregular shape, and acquired such development as to equal the uterus at the full period of gestation, but its aperture continued as at the former examination; after twelve hours' indisposition she died suffering from laborious respiration, irregular abdominal pains resembling severe spasms, violent retching, and œdema of the pelvic limbs. On opening the abdomen, eight hours after death, a quantity of fluid blood and serum escaped; the intestines were pushed up by a tumour which occupied the whole inferior part of the abdomen; the body and lower extremities of a foetus of eight months, in which decomposition had commenced, were seen protruding through a rent in the left side of the tumour; neither the left ovary nor corresponding tube could be found, and but a small portion of the round ligament of that side; the uterus, greatly lengthened and pisiform, extended from right to left across the tumour, to which it adhered anteriorly, and somewhat to the left side; it contained no decidua, it was five and a half inches in length, three in breadth, and one in thickness; the left tube was impervious, and the ovum seemed to have been arrested at its entrance into the uterus, the outer stratum of whose fibres was incorporated with the cyst, which still contained the head and upper part of the body of the foetus; *Dublin Journ. Med. Sci.*, vol. xv. p. 487. 1839.

Dr. Wilhelmi of Heidelberg informs me, that in the Museum of Professor Joerg at Leipsig, there is a preparation which was obtained from the body of a woman, in whom one of the tubes contained a foetus of seven months, when rupture of the envelope happened, and the individual suddenly died; the foetus and placenta were well formed.

Professor Burns, in the ninth edition, p. 232, of his *Principles of Midwifery*, relates a fatal case of tubal gestation in an unmarried female; but her age, the number of her conceptions, the particular tube, nor the period of her pregnancy, is specified; the length of the foetus was three inches, and that of the uterus $3\frac{1}{2}$ inches.



TUBO-UTERINE GESTATION.

THIS variety has already been observed to be of rare occurrence; and, accordingly, there are, strictly speaking, but a few instances on record. To the general head of Causes, I shall refer the consideration of the circumstances which may be supposed to influence their production.

That recorded by Patuna, is the first example that I can find of the present variety:—H. S., aged thirty-five, married twelve years, the mother of seven children, of whom two were twins, of a sanguineo-lymphatic temperament, and an adipose corpulent habit. She had twice been seriously indisposed, but recovered perfectly; and she suffered severely in all her labours, except when she produced the twins, when she had an easier time. When she was supposed to be in the fifth month of her eighth pregnancy, she was frightened and fell upon the street, in endeavouring to escape from an ox by which she was chased. The accident was not succeeded by any injurious effect, except a profuse sanguineous effusion per vaginam, which, after two months, gradually subsided without any remedy. July 10, 1763, after a fit of passion, the sanguineous discharge from the vagina returned profusely, accompanied by pains resembling those of labour. Although she was now at the close of pregnancy, yet no liquor amnii was evacuated,—the flow consisted entirely of pure blood. She died at eleven o'clock, and was sensible of foetal movement to the last.

Towards the right side, where the abdomen was considerably tumefied, no sooner were the parietes divided, than a foetus presented itself, which was almost *as large as one two months after birth*, and whose funis, after once encircling the neck, thereafter entered the right tube about an inch from the uterus. Neither membranes nor liquor amnii could be detected. The placenta was in the interior attached to the fundus uteri; which latter organ was larger than a clenched

hand, free from every appearance of cicatrice, and about an inch and a half in thickness.¹

In the forgoing case, it is obvious, that the ovum, *while entering the uterus*, must have been arrested in consequence of some pathological condition, in the extremity of the tube, where its development would seem to have advanced, until the date of the fall, when its cyst was probably ruptured, and the contents escaped into the abdominal cavity; where, as the placenta was in utero, and perhaps but slightly, if at all injured, the growth of the embryo still continued to advance. The rupture of the tube, and *trivial separation* of the placenta, will also account for the hæmorrhage with which the accident was at the time attended. And as on dissection, the mass was found detached, this must have been caused during the mental excitement which preceded the fatal attack, and affords a legitimate explanation of the hæmorrhage, and the death of the patient. There is no mention made of there having been a cyst for the foetus; and, excepting the portions which covered the concave surface of the placenta, the remainder of the membranes could not be found.²

¹ Sandifort's Thesaurus, p. 327. An. 1763.

² The two following illustrations of this variety, communicated by Laugier, are very interesting, and would seem, when they were made known, to have excited much scepticism among the profession. This practitioner was called to a labour in which the arm protruded from the os externum for thirty-six hours. After having brought the case to a successful termination, he felt a resisting bulky body, in the lower part of the abdomen, and being uncertain whether it was a mole or a second foetus, he advanced his hand into the uterus, where he recognised the orifice of the right tube, which was sufficiently large to admit a finger, by which he was enabled to explore this canal, and to discover therein a resisting, smooth, somewhat irregular body, about three inches in diameter. He wished to extract it, but the patient declined submitting, as, excepting a trifling sense of weight, it caused her no inconvenience. She informed him, that about three years previously, after the birth of her third child, she experienced the same symptoms as during the first five months of these pregnancies, with this difference only, that the abdominal tumour seemed rather placed towards the right side; that in this side, after the fourth month, she very distinctly, and for more than three weeks, felt foetal movement; that when this motion ceased, the volume of the abdomen immediately thereafter diminished to one-half; that she was not sensible this tumour had experienced any change; and that this last was her second delivery since the period referred to.

The next case, which, in most respects resembles the foregoing, happened in the practice of the late Mr. Hey of Leeds, by whom it was communicated to the late Dr. W. Hunter. The patient, aged thirty-five, of a healthy constitution, was seized, when two months advanced in her second gestation, with pains resembling colic, which were subdued by appropriate remedies; but in the sixth month they returned with much greater violence, and were more diffused than formerly. These ailments, though again alleviated, were always, however, reproduced by the motions of the foetus. At the close of the eighth, and in the middle of the ninth months, there were false pains; and on an examination per vaginam, the cervix uteri was harder and longer than was to be expected at the stage of pregnancy to which the patient had attained. When the term of gestation was concluded, the movements of the child ceased, which, with other phenomena, indicated the extinction of foetal life. Pains resembling those of labour supervened at intervals, without, however, influencing the os uteri; and there was occasionally, also, a trifling effusion of a sero-sanguineous character per vaginam; but what proved

Laugier's own lady was the subject of the second case. She became pregnant for the fourth time in the end of September 1771. During the early months, the tumefaction was chiefly confined to the right iliac region; and in the fifth month, when foetal movement was felt, pain also commenced in the same region, extending to the false ribs, and excited by the motions of the child or those of the parent. June 17, 1772, there were indications of labour; and on the evening of the 24th, in consequence of hæmorrhage, the hand was advanced into the uterus, where, floating within the membranes, in a large quantity of liquor amnii, the foot of a limb, which to the knee protruded from the right tube, was discovered, of which, after the escape of the liquor amnii, he satisfied himself, by passing the hand to the fundus uteri. He endeavoured to dilate the entrance of the tube, with a view to grasp the other limb, but failed, which obliged him to extract the foetus by the protruded extremity. When the thigh began to protrude, the flattened hand was advanced, and the second limb extracted. Some obstacle now impeded the removal of the body, whereupon the hand was introduced, and the tube found to have contracted upon the head of the foetus. The delivery being accomplished, and hæmorrhage having commenced, the hand was once more advanced, and the funis seized at the entrance of the tube, whence the placenta was withdrawn and extracted. The child was alive, and of the ordinary size, but died in about an hour thereafter; Archives Generales de Med. vol. xxviii. p. 332.

most distressing, was a porraceous vomiting, which led to emaciation; and in three months terminated the existence of the patient.

Dissection exhibited adhesions betwixt the omentum, intestines, peritoneum, and a large peculiar sac, which occupied nearly the whole abdominal cavity. Besides a well-formed foetus, free from every mark of decomposition, the cyst, which was a line and a half in thickness, contained a quantity of chocolate-coloured fluid, and some purulent-looking matter. The umbilical cord passed from the foetus through a narrow aperture, into a cavity whose walls were an inch and a half in thickness, but of much smaller dimensions than that which contained the foetus. This smaller cyst, which must have been the uterus, contained a placenta of a size so unusual, that it filled three-fourths of the cavity of the organ; both together, weighed two and a half pounds avoirdupois. No trace of cicatrice could be detected in the uterine parietes. The membranes of the ovum, after lining the uterine cavity, were reflected to form the inner lining of the cyst which lodged the foetus, and which was supposed to be the right Fallopian tube in a state of enlargement.

The tube in the foregoing case, influenced by the same laws which regulate the gravid uterus, must have been developed by an acquisition of structure, in a ratio with the growth of the foetus.¹

In the following case, recorded by Hofmeister, the patient, aged thirty-eight, and the mother of five children, became so delicate after an abortion, that she was obliged to confine herself to bed; but she conceived again notwithstanding. Deformity of the whole body supervened during her indisposition, and the pelvis was so vitiated, that the transverse diameter of its brim was reduced to an inch. The abdominal tumour descended upon the knees, and rendered examination per vaginam difficult. Through the parietes two tumours could be felt of a spherical shape, which might be considered as children, were it not that one of them was softer than the

¹ Med. Obs. and Inquir. Lond. vol. iii. p. 341.

head of a child. On the 23d of June 1821, trifling labour pains supervened, and the patient sunk undelivered. With a view to save the child, the Caesarian section was performed immediately after she expired. On opening the abdomen, a cyst presented itself, which contained a dead foetus, which was small and ill nourished. The uterus, which constituted the second tumour, afforded no evidence whatever of previous laceration. After arising from the umbilicus, the funis entered the right tube to be implanted into the placenta, which was contained in utero. Extending from the uterine cavity to form the cyst of the foetus, already noticed, the membranes of the ovum in their sound state, could be traced.

In the foregoing example, it would seem as if the ovum, after its separation from the ovary, was arrested in the uterine extremity or angle of the tube, which, during the development of the ovum, became enlarged, so as to form but one common cavity with that of the uterus. From this sac, the ovum, after having attained a certain degree of development, must have burst among the intestines, where, as the attachment of the placenta had not been injured, its development continued to advance. There is no mention made of any cyst except that which was formed by the membranes of the ovum; but as the parietes of the adventitious envelope are generally very thin, it is not improbable that this and the membranes had been confounded.¹

The patient of Feilitz had borne four children, and in her fifth pregnancy there was a peculiarity observed in the abdominal tumour. The right side became enlarged, and was separated from the left by a well-defined line of demarcation. Foetal movements, which excited pain, were limited to the right side, and extended under the false ribs. When four days in labour, Feilitz was called to the patient, and after having remarked the peculiarity particularized, he introduced the right hand to the fundus uteri, towards the right side of which the head of the foetus was felt disengaged; but after grasping it, he was obliged to relinquish his attempts at ex-

¹ Rust's Magazine, vol. xv. p. 126. 1823.

traction, owing to a sense of tearing complained of by the patient, as the entire body of the foetus was lodged in the right tube, the uterine extremity of which contracted on the neck of the child. By the finger, the dilatation of the contracted extremity of the tube was effected, during which some *liquor amnii* and *meconium* escaped; the funis and the placenta, which also were in the preternatural cavity, were, after acute suffering, withdrawn. A still-born foetus was extracted by turning, attended by considerable hæmorrhage; but the tube contracted so rapidly, that in an instant after the child had been withdrawn from it, the operator could no longer introduce his finger into the cyst.

From the escape of a little fluid at the commencement of labour, Feilitz was of opinion that the head also was at first contained in the tube; but as the woman recovered, this, though not improbable, from what was discovered in Hey's case, can only be considered conjectural. The foregoing history is highly interesting in several points of view; first, from the abdominal tumour and foetal movement having been so completely limited to the right side; secondly, from the circumstance of a foetus having grown to maturity in the Fallopian tube; and thirdly, from the patient having recovered, although so much freedom had been used with her organs.¹

¹ Biblioth. der Chir. vol. vii. p. 728.

SYMPTOMS OF EXTRA-UTERINE GESTATION.

Although, from the careful perusal of numerous histories of cases of this nature, some degree of facility of distinguishing their presence may be acquired after a certain period of their duration, and of deciding even, in occasional instances, on the particular variety of such pregnancies,¹ yet assuredly every practitioner who has attentively studied the subject, must admit the distinction to be a task of no ordinary difficulty.² In occasional instances, the phenomena do not differ remarkably, if at all, from those of natural gestations. Some females have enjoyed uninterrupted good health to an advanced stage, or, indeed, to the close of a period equal in duration to that of ordinary pregnancy;³ while others have

¹ Dès sa première visite, Albers soupçonna que la grossesse pouvoit être *extra-uterine*, et que les accidens dependoient de la rupture de la trompe uterine, ou d'une kyste dans lequel le fœtus se trouvoit renfermé; Repert. Gener. d'Anat. et de Physiol. Pathol. vol. i. p. 4, obs. 2.

² Telle est l'obscurité du diagnostic, après l'exploration du col uterin, que les Baudelocque, les Osiander, les Dubois, &c., n'ont jamais osé, au-milieu des incertitudes qu'il laisse, entreprendre, au terme de neuf mois, l'extraction de l'enfant; Archives Gener. vol. xxviii. p. 211.

³ The patient enjoyed excellent health till the close of the eighth month, though it afterwards appeared on dissection, that the fœtus was contained in the left tube, and weighed four and a half pounds; Repert. Gen. d'Anat. et de Physiol. Pathol. vol. v. p. 8, obs. 5. No unusual symptom manifested itself until the close of the seventh month; Recueil des Actes de la Soc. de Santé de Lyon, 1798: No unusual symptom, until advanced in the ninth month; Mem. Med. Soc. Lond. vol. iii. p. 197. Patient enjoyed perfect health during the whole term; Journ. de Med. Chirurg. et Pharm. vol. xxii. p. 437. No unusual symptom to the close of gestation; Hist. de l'Acad. Roy. de Med. de Paris, 1776, p. 308. Anno 1591, mense Martis iterum utero gestare coepit; cumque feliciter ad nonum mensem pervenisset, &c.; Primrosii, Morb. Mulier, lib. iv. p. 316. Omnia signa habens felicitis impregnationis usque ad legitimum tempus pariendi; Miscell. Curios. Decade 3, obs. 78, an. iv. 1696. Patient enjoyed such health as women usually do during pregnancy; Med. Comment. Edin. vol. v. p. 311, 1771. Patient advanced safely to the close of her third pregnancy; Recueil Period. de la Soc. de Med. de Paris, vol. xiii. p. 63.

been considered as suffering from *retroversio uteri*, or from some disease either of this latter organ, or of one of the ovaries.¹ In other examples, again, and which may be considered by far the most numerous, symptoms the most distressing arise at an early period, and continue more or less constantly during the retention of the ovum or foetus, as, for example, pains in different regions of the abdomen, sometimes so intense as to excite syncope, or even convulsions, and to be uncontrollable by the most powerful doses of opium.²

In many instances of the different varieties of misplaced gestation, the catamenia are suspended;³ frequently, however, they appear regularly in each of the early months;⁴ in some cases, they flow at uncertain periods; and in other examples

¹ *Med. Comment. Ed.* vol. xx. p. 254; *Mem. Med. Soc. Lond.* vol. vi. p. 107; *Med. and Phys. Journ. Lond.* vol. xi. p. 293; Bonnie's case, notes, p. 71 of this *Mem.*; *Glasgow Med. Journ.* vol. iii. p. 153; Krohn, p. 3-1791; Mr. Messer's case, p. 68 of this *Memoir*; as also that of Dr. A. Smith, p. 56.

² *Miscell. Nat. Curios. Decade 2, an. 5, obs. 174*; Lieutaud, obs. 1533; *Hist. de l'Acad. Roy. des Scien.* 1773; *Trans. Med. Chir. Knowl.* vol. ii. p. 287; *Journ. de Sav.* 1756; Bianchi, p. 166; Dr. Chisholm's case, *Burns' Princip. edit. 9, notes to p. 233*; *Journ. de Med. Chir. et Pharm.* vol. xviii.; *Journ. Gener. de Med. de Chir. et de Pharm.* vol. xxvii. p. 302; *Philos. Trans.* vols. iv. p. 365, and ix. pp. 170 and 460; *Med. Annals. Ed.* vol. iii. p. 379; *Med. Annals*, vol. vii. p. 412; *Nouv. Journ. de Med.* vol. ii. p. 320; *Nouv. Journ. de Med. Chir. et Pharm.* vol. xv. p. 51; *Journ. de Med.* vol. v. p. 380; *Med. Ess. Edin.* vol. v. p. 362; *Med. Observ. and Inquir.* vol. ii. p. 369; *Archiv. Gener.* vol. ix. p. 423; *Recueil Period. de la Soc. de Med. de Paris*, vol. xiv. p. 289; *Journ. Complement.* vol. vi. p. 259; *Med. Soc. Lond.* vol. iii. p. 176; *Med. Journ. Lond.* vol. v. p. 396; *Med. Journ. Lond.* vol. viii. pp. 342 and 347; *Med. Obs. and Inquir.* vol. iii. p. 341; *Med. and Phys. Journ. Lond.* vol. xi. p. 293.

³ Lieutaud, *Obs.* 1553; *Nouv. Journ. de Med.* vols. ii. and x.; *Med. Obs. and Inquir. Lond.* vol. ii.; *Med. Chir. Trans.* vols. viii. and xiii.; *Med. and Phys. Journ. Lond.* vol. xxxvii. p. 196.

⁴ Manget. *Thesaur. Anat.* vol. ii.; Tulpius, *Obs. Med. lib. iv. chap. 39*, p. 358; *Miscell. Nat. Cur. Decade 2, an. 2*, p. 447; *Mem. Acad. Roy. des Sci.* 1702; *Recueil des Act. de la Soc. de Santé de Lyon*, 1798; *Journ. de Med.* vol. v.; *Med. Chir. Trans. Lond.* vols. vii. viii. xiii.; *Med. Repos. Lond.* vol. xix.; *Med. and Phys. Journ. Lond.* vols. xi. and xiv.; Boehmeris, *Fasc. i.* p. 19; *Journ. des Connais. Med. Chir.* *Fevrier*, 1837; Mr. Messer's case, p. 68 of this *Memoir*; *Med. Chir. Rev.* vol. i. p. 299.

they are either profuse, or limited in quantity.¹ In many cases, at an uncertain period of gestation, we have hæmorrhagic uterine effusions,² the extrusion of coagula, of bodies which resemble moles, or portions of the placenta.³ These appearances have occasionally led to the belief, that the patient had actually aborted, or that the ovum was originally not extra, but intra-uterine, and had escaped through a rent in the uterus into the peritoneal cavity,—the extruded body in either case being viewed as the placenta.⁴ Cases attended with much uterine excitement, whether arising from unusual exertion, or some external injury, are the most likely to be accompanied by these latter phenomena.

The mammæ enlarge, and the areola is progressively developed, as in ordinary cases; the patient may, or may not, suffer from morning sickness; and foetal movement is felt at the usual period.

In studying the symptoms, those referred to the abdomen demand careful investigation. We have particularly to consider, more especially in the early months, whether the tension or tumefaction, if there be either, be confined more to one side of the abdomen than the other; and whether any uneasiness, of which the patient may complain, and foetal movement, be limited to the same side of the cavity.⁵ Nor

¹ Phil. Trans. Lond. vols. ii. and vii.; Act. Acad. Theodor. Palat. vol. ii. p. 404; Halleri, Disput. Med. vol. iv. p. 793; Med. Chir. Rev. vol. v.

² Phil. Trans. vol. ix.; Sandifort's Thesaur. p. 327; Hist. de la Soc. Roy. de Med. de Paris, 1776, p. 308; Gifford's cases, p. 375; Annals of Med. Edin. vols. ii. and iv.; Med. Comment. Edin. vol. ii.; Archiv. Gen. vol. ix.; Med. and Phys. Journ. Lond. vol. lix.; Med. Chir. Rev. Lond. vol. v.

³ Journ. de Med. Chirurg. Pharm. &c., vol. xxxix.; Nouv. Journ. de Med. Chirurg. Pharm. &c., vol. xv.; Recueil Period. de la Soc. de Med. de Paris, vols. xiv. and xxvii.; Med. Journ. Lond. vol. viii.; Muller, Act. Physic. Med. vol. v. obs. 152; Journ. Med. Sci. Dublin, vol. xv.

⁴ Med. Journ. Lond. vol. viii. p. 335; Mem. Med. Soc. Lond. vol. iii. p. 176.

⁵ Joannis Rioli filii Anthrop. lib. 2; Miscell. Nat. Curios. Decade 3, an. 4, obs. 78; Phil. Trans. Lond. vol. iv. p. 365; Mem. de l'Acad. Roy. des Sci. 1702; Journ. des Savans, 1722; Lieutaud, obs. 1539, and 1542; Hist. de l'Acad. Roy. des Sci. 1756; Recueil Period. de la Soc. de Med. de Paris, vols. vi. xiii. and xxvii.; Med. Obs. and Inquir. vol. ii.; Med. Journ. Lond.

must we overlook, in this part of the inquiry, that in a large majority of the cases under consideration, the various ailments of the patient have been more aggravated than in natural gestations, as may be remarked by consulting the foregoing histories. These complaints may either be functional or structural. Among the former, vomiting, diarrhoea, constipation, and harassing tenesmus, with dysuria, or some degree of obstruction to the flow of urine, may be particularized, arising either from the mechanical influence of the cyst and its contents, or from the effects of morbid alterations in the ambient organs. The second order are very harassing to the patient, and often recur under the form of excruciating pains in the umbilicus, resembling severe colic, near the pubis, or in either iliac or lumbar regions. A sense of weight and uneasiness, deeply seated in the pelvis, thence sometimes extending to the kidneys, whence it becomes more or less acute, is particularized by M. Chaussier.

The most satisfactory information regarding the nature of the case, may, in very many instances, be derived from an examination *per vaginam*. We have here to consider the position and size of the uterus, and whether any other body can be discovered in connection with it, as must happen whether the extra-uterine ovum be contained either in a tube, or in an adventitious cyst. Frequently the *os uteri* cannot be reached at all, or with difficulty, from the organ being elevated in the brim, or, indeed, considerably above the pubis.²

vol. vi. ; Krohn, Lond. 1791; Med. Comment. Edin. vol. xi. ; Hist. de l'Acad. Roy. des Sci. 1773 ; Med. and Surg. Journ. Edin. vol. vi. p. 50 ; Archiv. Gen. vol. ix. ; Med. Chir. Trans. Lond. vol. xiii. ; Journ. de Med. Chir. Pharm. &c., vol. xviii. ; Med. and Phys. Journ. Lond. vols. xiv. xxx. xxxv. and xxxvii. ; Nouv. Journ. de Med. vol. ii. ; Med. Journ. Glasgow, vol. iii. ; Journ. des Connais, Med. Chir. Fevrier, 1837 ; Dr. A. Smith's case, p. 56 of this Memoir, as also that of Dr. Loudon, p. 65 ; Patuna, Feilitz, and Laugier's cases, pages 91 and 92 of this Memoir.

¹ Phil. Trans. Lond. vol. iv. ; Journ. de Savans. 1722 ; Recueil Period. de la Soc. Med. de Paris, vol. xxvii. ; Med. Journ. Lond. vol. v. ; Med. Trans. Dublin, new series, vol. i. ; Bonnie, à Paris, 1822 ; Med. Journ. Glasgow, vol. iii. ; Dr. A. Smith's case, p. 56 of this Memoir.

² Krohn, Lond. 1791 ; Phil. Trans. abrid. Lond. vol. iv. p. 365 ; Gifford's cases, p. 375 ; Journ. Gen. de Med. Chir. et Pharm. vol. xxvii. ; Nouv. Journ.

A practitioner, were he led to consider his patient at the close of her pregnancy, or actually in labour, would naturally be astonished to find the cervix uteri in its unimpregnated condition, and the organ itself either empty, or its size considerably less than might be expected in a natural gestation of the same duration.¹ Or if, with an undeveloped state of the uterus, the head, breech, or foot, were recognized in the brim, or in the pelvis, included in a cyst,² such a case would receive that share of attention which could not fail to disclose its nature. Although, with some rare exceptions,³ the uterus increases in size, yet I believe there is no case in which it has equalled that of the same organ in the fifth month of natural gestation. Instead of the womb being elevated in the brim, it has, in some rare instances, been pushed so low into the pelvis, that its cervix has protruded beyond the os externum.⁴

In the *ovarian variety*, impending laceration of the organ is characterized by a previously impaired state of health, varying in duration; sanguineous effusion per vaginam; universal languor and debility, bordering on syncope; abdominal

de Med. et Chir. vol. x.; Recueil Period. de la Soc. de Med. de Paris, vol. xxvii.; Med. Journ. Lond. vol. v.; Med. and Phys. Journ. Lond. vol. xi.; Med. Comment. Edin. vol. xviii.; Bonnie, à Paris, 1822; Med. and Surg. Rev. Lond. vol. ii.; Med. Journ. Glasgow, vol. iii.; Messer's case, p. 68 of this Memoir.

¹ Phil. Trans. Lond. abrid. vol. vi. p. 666; Hist. de l'Acad. Roy. des Sci. 1716 and 1748; Camper. Anat. et Pathol. tab. ii. paragr. 16; Bononiens, Institut. 1767, Obs. 1532; Lieutand, Obs. 1767; Deutch, Halae, 1792; Med. Comment. Edin. vols. v. and xvii.; Med. Annals, Edin. vol. iii.; Journ. de Med. Chir. et Pharm. &c., vols. xxii. and lxv.; Recueil Period. de la Soc. de Med. Paris, vols. xiii. and xxii.; Mem. Med. Soc. Lond. vol. iii.; Med. Obs. and Inquir. Lond. vol. iii.; Med. Journ. Lond. vol. viii.; Med. Chir. Trans. Lond. vol. v.; Med. and Phys. Journ. Lond. vol. xi.; Evesque, à Paris, 1806; Dr. A. Smith's case, p. 56 of this Memoir; Dr. W. Smith's case, p. 48.

² Med. Obs. and Inquir. vol. iii.; Med. Comment. Edin. vol. xviii.; Med. and Surg. Rev. vol. ii.; Phil. Trans. vols. iv. and ix.; Recueil Period. de la Soc. de Med. de Paris, vol. v.; Perfect's cases, vol. ii. p. 171; Dr. Ingleby's cases, Med. and Surg. Journ. Edin. vol. xlii.

³ Med. and Phys. Journ. Lond. vol. xxviii.; Med. Annals. Edin. vol. iv.; Med. Repos. Lond. vol. vi.; Messer's case, p. 68 of this Memoir.

⁴ Dr. King's case, p. 76 of this Memoir.

uneasiness, sometimes a circumscribed swelling with pain, which last is confined at first to the situation of the affected organ. The pain does not become suddenly severe, as is the case in the tubal variety, and the ailments of the patient are somewhat protracted. From the cases in illustration, it may be gleaned, that, with few exceptions, the sufferings of the patient have been prolonged for periods varying from one to several weeks, or even months. Difficult micturition, and insupportable tenesmus, precede the fatal termination in the generality of such cases. Great irritation of the stomach, convulsions, collapse of the features, and universal prostration, all of which are present, are not, however, peculiar to this variety.

Of the cases that have been narrated, more or less minutely, the age of a young unmarried female was only thirteen years; and that of other sixteen, varied from twenty-six to forty. Of fifteen individuals, the number of whose gestations is particularized, there were, including the foregoing, five unmarried females, all of whom, except one, were pregnant for the first time, and this last was in her second gestation; the remainder, except one, had borne children formerly. The remarkable circumstance of so many unmarried females being found in a list so comparatively small, affords some support to the notion of Austruc¹ and Josephus,² that extra-uterine gestations are more likely to be met with in them and in widows, than in matrons of regular habits. In *two* instances, both ovaries were in a state of impregnation contemporaneously; in *one*, there was contemporaneous *intra*, and extra-uterine gestation of the left ovary; in *eighteen* other cases, the left organ constituted the residence of the ovum; and in *twelve* instances, the right ovary contained the product. On two occasions, the ovum was thought to have been retained for *one* month; on six, for *two* months; on two, for *three* months; on six, for *four* months; on three, for *five* months; on one, for *six* months; on three, for *seven* months; and on three, for the period of *nine*, or more months.

¹ Austruc, vol. v. p. 106.

² Burdach's Physiology, vol. ii. p. 355.

As to the *ovario-tubal variety*, there is reason to believe, from the foregoing illustrations, that when the ovum, instead of being contained in, has simply contracted a vascular connection with the ovary, or stands in the same relation with the fimbriæ of the Fallopian tube, and has been considered as lodged in the abdomen, that the cyst is by no means so liable to burst as when the product is in the ovary or tube. In the abdominal cavity, the envelope is very little, if at all restrained during its development, until the gestation is far advanced in its progress; it, moreover, contracts adhesions with the ambient structures, which must tend still farther to retard or prevent laceration, and thus explain the occasional retention of the fœtus for periods which, in duration, almost exceed the bounds of credibility.

When the cyst is not injured, and the gestation advances to the close of the natural term, fœtal life then becomes sooner or later extinct, either from rupture of the envelope, or from partial separation of the placenta, very probably occasioned by fœtal struggles, which are often so violent as to be particularly felt by the parent, and to be among the first warnings communicated to her of some impending misfortune.¹ *Secondly*, in consequence of uterine irritation, and the influence of the uterus on other organs, efforts are now made, and from time to time renewed, for the dislodgement of the fœtus. *Thirdly*, after the extinction of fœtal life, the tumidity of the abdomen diminishes, sometimes speedily, but in occasional instances, slowly. *Fourthly*, when the patient survives rupture of the cyst, the mammæ become tense, and milk is secreted, whatever structure constitutes the envelope. *Fifthly*, during the expulsive efforts, blood, liquid or coagulated, may be effused per vaginam. *Sixthly*, the catamenia sooner or later

¹ Fabric. Hildan, 908; Hist. Acad. Palat. vol. ii. p. 403; Manget. Thesaur. Anat. vol. ii. p. 142; Miscell. Nat. Curios. Dec. 3, An. 4, Obs. 87; Spach. Morb. Mul. p. 19; Hortii, Oper. Med. lib. xi. p. 565; Hist. de l'Acad. Roy. des Scien. de Paris, 1776; Sandifort, lib. ii, p. 35; Act. Lips. 1706; Perfect's cases, vol. ii. p. 187; Archives Gener. vol. ix.; Journ. de Med. vol. v.; Recueil des Act. de la Soci. de Santé de Lyon, 1798; Med. and Phys. Journ. Lond. vol. xiv.; Med. Journ. Lond. vol. vi; Mr. Messer's case, p. 68 of this Memoir.

reappear. And, *finally*, the patient has, in some instances, been sensible of an unusual sound, or of a feeling of something having given way in the interior, at the moment the rupture of the cyst must have happened.¹ Although, as a general rule, the foetus dies at, or soon after the close of nine months, yet there is abundant evidence that this does not invariably happen.²

Of the cases referred to in illustration of this variety, and which, in some instances, are *not by any means to be considered indisputable*, there were *two* of the patients twenty years of age; *two*, twenty-one years; *one*, twenty-two; *one*, twenty-three; *five*, twenty-four; *one*, twenty-five; *five*, twenty-six; *five*, twenty-eight; *eleven*, thirty; *three*, thirty-two; *four*, thirty-three; *three*, thirty-four; *four*, thirty-five; *five*, thirty-six; *four*, thirty-seven; *five*, thirty-eight; *one*, thirty-nine; *six*, forty; *one*, forty-one; *one*, forty-two; *one*, forty-five; *one*, forty-six; and *one*, forty-seven.

In ninety-eight cases in which we can decide, or nearly so, on the stage of pregnancy, the foetus in *seventy-nine* patients died at the close of nine months, or soon thereafter; *one*, in the eighth; *seven*, about the seventh; *one*, in the sixth; *two*, in the fifth; *two*, in the fourth; *five*, in the third; and *one*, at the end of the first month.

The extra-uterine was the first gestation in *four* of the patients; the second, in *eleven*; the third, in *thirteen*; the fourth, in *four*; the fifth, in *four*; the sixth, in *four*; the seventh, in *two*; the eighth, in *two*; the ninth, in *one*; the tenth, in *one*; the eleventh, in *one*; the twelfth, in *one*; and the thirteenth, in *one*.

¹ Sue Ess. Hist. &c., sur les Accouch. vol. ii. p. 61; Med. and Phys. Journ. Lond. vol. lix. p. 337.

² In the tenth month, motion was sometimes felt in the right, and sometimes in the left side, but thereafter in the left side only. She was impressed with the belief that foetal movement had continued till the thirteenth month; Journ. Complement. vol. vi. p. 257. After a lapse of twenty-six years, there was found in the abdomen a foetus free from decomposition, weighing eight lbs., and with teeth which had attained the development of those of an adult; Phil. Trans. vol. ii.; Journ. de Med. Chir. Pharm. &c., vol. xviii.; Poteau Melange de Chirurg. p. 389.

Two patients had the product of three extra-uterine gestations in their abdomen at one time; in both individuals, all the decomposed structures were evacuated through the abdominal parietes, and each recovered. Nine women conceived *once* during the retention of the extra-uterine foetus; two, *twice*; one, *three times*; one, *four times*; one, *six times*; and one, *seven times*. There were two cases of contemporaneous intra and extra-uterine gestation. In this variety, two single women only are particularized. In seventy-five cases, the foetus was retained for the following periods, viz., three months in *two* instances; four months in *one*; five months in *one*; nine months in *two*; fifteen months in *three*; sixteen months in *two*; seventeen months in *two*; eighteen months in *seven*; one year in *five*; two years in *eight*; three years in *seven*; four years in *four*; five years in *one*; six years in *two*; seven years in *three*; nine years in *one*; ten years in *three*; eleven years in *two*; thirteen years in *one*; fourteen years in *two*; sixteen years in *one*; twenty-one years in *one*; twenty-two years in *one*; twenty-six years in *two*; twenty-eight years in *one*; thirty-one years in *one*; thirty-two years in *one*; thirty-three years in *one*; thirty-five years in *two*; forty-eight years in *one*; fifty years in *one*;¹ fifty-two years in *one*; fifty-five years in *one*; and fifty-six years in *one*. In *twenty-six* patients, the decomposed structures were evacuated through the rectum, and of this number *six* died. The foetal structures passed through the abdominal parietes in *twenty-nine* cases, and *three* of the number died. In eight instances, the remains of the foetus were discharged per vaginam, and three of the patients died.

In *Tubal Gestations*, the crisis is particularly marked by the abdominal uneasiness supervening suddenly,—most frequently when the patient is in the enjoyment of perfect health, be-

¹ Med. and Phys. Journ. Lond. vol. iii. p. 422. The examination in this case does not appear to have been conducted with sufficient care to merit special attention. She was supposed to have conceived at the age of thirty-two, but had her catamenia regularly. The period at which she expected her confinement was not attended by any of the usual phenomena of parturition; and she died suddenly after a paralytic attack, when a large osseo-calcareous mass, weighing 18½ lbs. avoirdupois, was found in the abdomen.

coming at once very violent and uncontrollable, and not slowly so, as in ovarian gestations; being diffused, and extending so much into the umbilical region, as to have been compared to a severe attack of colic, and a circumscribed swelling, or sense of fulness, in the side affected. The present variety is rarely attended by that distressing tenesmus, and occasional sanguineous effusions per vaginam, which generally accompany ovarian cases. Sometimes the patient experiences a rigor; a countenance naturally florid and animated becomes very suddenly ensanguined and ghastly; the pulse is accelerated, but feeble; the abdomen becomes tense; the surface generally, imbued with cold clammy perspiration; and there is a constant sense of or frequently actual fainting; at last, a short interval of mitigated sufferings succeeds. The symptoms, however, return under an aggravated form; the pulse intermits; there is extreme anxiety; occasionally spasms or delirium; but in other instances, the patient is conscious of her approaching dissolution, which happens after a period of suffering, varying from five hours to three days. In some rare examples, instead of lesion of the tube being attended with excessive pain, there are no other symptoms present except such as are characteristic of extreme depression of the living powers.¹

Of eighty-eight illustrations, in which the duration of pregnancy could be very nearly determined, the following are the periods for which the ovum was retained, viz., nine from one to two months; seventeen from two to three months; fifteen for three months; ten for four months; six for five months; two for six months; three for seven months; four for eight months; nine for nine months; one for ten months; two for one year; one for eighteen months; three for seven years; one for ten years; one for fifteen years; one for sixteen years; one for seventeen years; one for twenty years; and one for forty-six years. The *right* tube constituted the envelope of the ovum in thirty-four, the *left* in forty-one cases. From this statement, it will appear that the retention of the ovum does not take place so much more frequently in the

¹ Ingleby's cases; Med. and Surg. Journ. Ed. vol. xlii.

left than in the right tube, as some writers would have us believe.¹ It was the first gestation in ten of the cases, and sixty-five had children formerly. All the patients except six, were twenty-four years of age, or upwards. Among the illustrations, there are but *two cases* of unmarried females; one instance in which the breach in the abdominal parietes was dilated *with success*; and two patients in whom gastrotomy was unsuccessfully performed. There is one example of contemporaneous intra, and extra-uterine gestation. One woman produced *four*, and a second six children, during the retention of the extra-uterine foetus.

In the *Tubo-uterine* variety, the cases in illustration are so few in number, as to afford but little scope for deciding upon phenomena that can with any certainty be considered pathognomonic. The symptoms would seem to be a combination of those which have been particularized in the histories of Ovario-tubal, and Tubal cases. In the example recorded by Mr. Hey, and in that of Madame Laugier, the patients were harassed by those abdominal pains and sanguineous effusions so characteristic of all the varieties of extra-uterine gestation, but in an especial manner of the ovario-tubal; while in the other four cases these symptoms were wanting. There was, however, in all of them one very peculiar feature, viz., the tumefaction and foetal movement being distinctly limited to a particular side of the abdomen. It also remains to be noticed, as somewhat remarkable, that in all of them foetal existence was prolonged to the close of nine months, or, indeed, considerably beyond this period, in the example related by Patuna, who states, that the child was as large as one two months after birth.

In all the illustrations of this variety, the foetus was developed in the right tube; three of the patients had attained the age of thirty-five years and upwards, but that of the other three is not stated; and their gestations numbered from two to seven, including the extra-uterine pregnancy.

¹ Inter decem graviditates in tubis Fallopiianis obvias, ne unam quidem in dextroprehendit latere; Hiemus, Journ. Lod. b. ii. p. 598.

CAUSES.

WERE we to be satisfied with probabilities, numerous and very plausible explanations might be advanced to account for the occurrence of extra-uterine pregnancies, such as pathological changes, tending, *first*, to retard the departure of the product of conception from the ovary; *secondly*, to prevent the fimbriæ embracing, or the tubes receiving it; *thirdly*, to impede its progress along the latter; and, *fourthly*, to obstruct its entrance into the uterine cavity.

The ovaries, it must be confessed, are prone to chronic excitement, which may perhaps be viewed as a predisposing state, by the morbid action extending to the structures of the ovulum, or even to the Fallopian tube itself, while this organ and the ovary are in contact; and thus, as already alleged, lay the foundation for the Ovario-tubal, or Tubal variety, of misplaced gestation. Morbid conditions of the product of conception may be enumerated among the predisposing causes. As the structures of the ovum may be found in a state of disease at the various stages of pregnancy, it is not unreasonable to infer, that some pathological changes may originate with the ovulum, which, consequently, in its transit towards the uterus, might contract an adhesion with the tube. The naturally contracted calibre of the Fallopian tubes, has been long admitted as a predisposing cause of Tubal cases, and thought satisfactorily to account for their frequent occurrence. These canals, as must be familiar to every one possessing a knowledge of their formation, gradually become more contracted as they approach the uterus, where their aperture is sufficient merely to admit a bristle; wherefore, it may naturally be supposed, that a trivial degree of engorgement of their inner lining, for example, might obliterate the canal at a particular point, or throughout its whole

course, and thus afford a cause that might be considered indisputable.¹

We have already observed, that in female infants who die soon after birth, a bifurcated formation of the uterus, as is natural to the female of some of the lower animals, is manifest. Breschet² has constantly, and I have myself occasionally, remarked this disposition. Boehmerus,³ Morgagni,⁴ M. Garnier of Angers, Professor Dumeril, and others,⁵ have seen it in the adult subject. The knowledge of this fact enables us to account for those rare cases which constitute the Tubo-uterine variety; where the ovum has effected a lodgement, been developed, and partly found, in the bifurcation, and partly in the uterine cavity; or where the fœtus has eventually passed *per vias naturales*, during parturition.

Although there are good grounds for admitting both the presence and the influence of the alleged pathological changes, yet from the impenetrable veil which still covers many links in the important function of impregnation, we may never have ocular demonstration of some of the causes. It would, therefore, be rash to speak confidently on a point so obscure; and since, moreover, one of the conditions in question, viz., that of the Fallopian tube, might originate subsequently to the misplacement of the ovulum.

It is to be remembered, that the ovaries and Fallopian tubes are liable to be affected by many of the ordinary causes of irritation, and they are in an especial manner also frequently exposed to excitement, in consequence of their intimate connection with, and being engaged in the same common function as, the uterus; an organ which, of all others in the

¹ Epistolæ Morgagni, xvi. xxi. xxiii. xxvi. xxix. xlvi. lii. lxi. lxvii. lxviii. lxi. ; Cypriani Epist. Thomæ Millington; Med. Chir. Trans. Lond. vols. vii. and xiii. ; Med. and Surg. Journ. Edin. vol. xlii. ; Breschet's Memoir; Med. Chir. Rev. vol. v. ; Med. Repos. Lond. vol. xix. ; Journ. Complement. vol. vi. ; Recueil Period. de la Soc. de Med. vol. xiv. an. 6; Drs. A. Smith and Murphy's cases; Encyclog. des Sci. Med. Fevrier, 1837.

² Memoir Repert. Anat. Physiol. Pathol. &c. l. c.

³ Fas. 2, Obs. v.

⁴ Epist. iii. Art. 21.

⁵ Archives Gen. vol. xi. 1826; Med. Chir. Trans. Lond. vol. xvii. p. 473; Med. Gaz. Lond. vol. xiii. 1833-34, p. 898.

economy of the female of our race, particularly during her menstrual life, is more or less constantly under the influence of powerful excitement, arising either from ordinary mental causes, or from those of a delicate nature. Whether the changes superinduced by the alleged causes may consist in incrassation or chronic inflammation of the tunics or other tissues composing the ovary; in induration or paralysis of the fimbriæ; shortness, spasm, paralysis, or contraction of the calibre of the tube; contraction or spasm of the uterine extremity of the tube; or in disproportion betwixt the ovulum and the area of the tube, or the entrance of a process of the decidua into the latter, it might not, perhaps, be very profitable to inquire.

As already observed, the ovaries are prone to chronic inflammation, and they may be thus affected without any collateral influence; but frequently, also, they take on diseased action, while a similar change is going forward in some other organ,¹ more particularly the uterus,² and occasionally the lungs, the liver, and kidneys;³ under all of which circumstances individuals have been known to conceive. When the ovaries are the seat of disease, there can be no reason why the morbid excitement might not extend to the structures of the ovulum, and thus lead to its detention in connection with the diseased organ. The cases recorded by Sir Everard Home and Mr. Stanley, both already referred to, are somewhat in point.

In some instances, the patient has been suffering under general ill health for a considerable period before, or at the time the misplaced gestation must have occurred. Occasionally, where the ovary has been alleged to constitute the envelope of the foetus, the corresponding organ has been found diseased. The same law is occasionally observed to hold good in regard to the ovaries, as the eyes and other organs,

¹ Manget. *Thesaur. Anat.* vol. ii. p. 141.

² *Nouv. Journ. de Med. et Chir.* vol. x.

³ *Journ. de Med. Chir. &c.*, par Corvissart, &c., vol. xxvi. p. 23; *Act. Acad. Nat. Cur.* vol. v. obs. 152; Dr. Duncan's case, p. 91 of this Memoir; Mr. Darby's case, p. 93 of this Memoir; *Med. Gaz. Lond.* vol. vii.

though by no means so readily, viz., that the sound one is apt sooner or later to participate in the same change which affects the diseased organ.¹ It has also sometimes happened, that sterility, or one or other of the varieties of extra-uterine gestation, has succeeded to one or repeated abortions,² to a premature labour, or to a delivery attended with much suffering,³ favouring the opinion that some consequent organic change had ensued, and at a subsequent period led to the misplacement of the ovum.

Although in *Cyprians*, who are rarely productive,⁴ we are afforded a satisfactory illustration of the influence of undue indulgence in hymeneal pleasures in deteriorating the reproductive function, yet our knowledge of the structural changes inseparable, as I should conceive, from such a state, is limited.⁵ In females of easy virtue, and occasionally, also, in married women, one or both of the Fallopian tubes have been found cohering by their fimbriæ to the anterior or posterior surface of the uterus, or broad ligaments,⁶ whereby their extremities would be prevented from embracing the ovary, when the performance of this part of the function should take place. It is

¹ Journ. de Med. Chir. et Pharm., &c. vol. v.; Glasgow Med. Journ. vol. iii.; Trans. Coll. Phys. Lond. vol. vi.; Dr. Duncan's second case, page 91 of this Memoir.

² Krohn on Extra-uterine Gestation; Hist. Acad. Roy. des Sci. part ii. an. 1748, p. 73, an. 1773, p. 270; Denman's engravings; Medical Annals, Ed. vol. vii. p. 412; Trans. Roy. Soc. Edin. vol. v.; Dr. Duncan's first case, p. 91 of this Memoir.

³ Rust's Mag. vol. xxix. No. 2; Med. Phys. Journ. Lond. vol. xxxvii. p. 196.

⁴ En résumant toutes ces reponses qui m'ont été faites, et ce que j'ai trouvé dans quelques livres anciens et modernes, j'ai du tirer cette conclusion: que mille prostituées fournissent à peines six accouchemens, dans le courant d'une année; Duchatelet sur la Prostitution, vol. i. p. 230.

⁵ Intemperantia in re venerea, quæ uti ad vitiosas graviditates in genere, ita ad tubarias in specie multum conferre posse videtur; Schlegel, vol. i. p. 373.

⁶ In the body of a Cyprian who was supposed to have died during sexual congress, the extremity of one of the tubes was found cohering to one of the ovaries. In the body of another Cyprian, who was lame, and forty years of age, one of the tubes was found agglutinated to the corresponding ovary; Morgagni Epist. xxvi. art. 14, xlviii. art. 32; Med. Chir. Trans. Lond. vol. viii. p. 503, vol. xiii. p. 55. In one of Dr. Ingleby's cases, the left tube cohered to the cervix uteri; Med. and Surg. Journ. Edin. vol. xlii.

not, of course, to be supposed that this state of the tubes would be productive of any other result than infertility; but on observing such remarkable effects, I presume the inference would be quite legitimate, that the cause which had led to them, might occasionally, also, have been productive of other structural changes, sufficient to account for some *variety* of extra-uterine pregnancy. Although I would by no means wish to be understood as positively affirming in what the disorganization consists, or whether the ovary, ovum, tube, or uterus, is most frequently its seat, yet the following fact deserves to be noticed, viz., that of nine unmarried females, the subjects of extra-uterine gestation, five of the number have been of those considered ovarian, one tubal, and three ovario-tubal. One of the ovarian cases, and of which the pathological account is everything that could be desired in point of accuracy, was an individual who had practised her avocations as a *Cyprian* for twenty years.¹ In support of the influence of pathological changes, it is further to be observed, that misplaced gestations have been most frequent, not among the youngest class of individuals, but in those somewhat in advance of this stage of life, as also in women who have borne several children; as first impregnations, they have only happened in the proportion of one to seven or eight subsequent births. This disproportion we should not have expected, considering that in a record of 1120 deliveries, there may be of this number 461 women confined for the first time.²

Some importance has been attached to mental agitation during the enjoyment of the conjugal embraces, as a cause of extra-uterine gestation.³ The solution of so delicate a problem as the *modus operandi* of such an agent, will not be attempted; but as its influence, it may be presumed, can be but very transient, a doubt may be expressed as to whether its effects could at all extend to, or continue so long as the period

¹ Boehmeri, Fasc. 1.; Journ. de Med. Chir. Pharm. vol. v.

² Prat. Treat. on Midwifery, R. Collins, M.D. p. 490.

³ Terrorem, timorem, anxietatem, indignationem, si nempe hae momento coitus veneris voluptatem subito interrumpunt, causas conceptionis extra-uterinae esse credit; Kruger, Schlegel, vol. ii. p. 232.

at which the product of conception takes its departure from the ovary, and which is thought not to happen for several days after fruitful coition.¹ The first illustration recorded, in which the cause under consideration was supposed to have occurred, was by the late distinguished M. Baudelocque of Paris, under whose management at la Maternite, a woman died in extra-uterine pregnancy. She ascribed her condition to her having heard, while receiving the embraces of her lover, some one turning the key of her apartment, by which she was exceedingly alarmed: the movement of the foetus was felt, precisely four months after this interview.²

In a second case resembling the foregoing, a female of an amorous disposition was very much agitated in consequence of the abrupt entrance of some one into her apartment, immediately after she had received the embraces of her husband. This happened in the beginning of October 1815, and in the end of the preceding month, she had her catamenia. On the 30th May following she died, when a foetus of six months was found in an adventitious cyst, on the left side of the pelvis.³

In a third instance of this nature, a woman was very much agitated in consequence of a stone having been flung through the window of her apartment, while she was in the act of receiving the embraces of her husband. This happened on the 20th February 1819, and on the 3d of March following her husband died. Until about this period she had always been regular, though married twelve years. On the 6th December, pains resembling those of labour supervened, when, as the cervix uteri could not be reached, extra-uterine gestation was suspected. This individual remained a widow two years, when she married. She died March 10, 1824, without having had issue by the second union. The extra-uterine foetus, which was still retained, was now removed; but the odour which the abdomen exhaled was so intolerable, as to

¹ Vide p. 12 of this Memoir.

² Dict. des Sciences, Med. vol. xix. p. 399.

³ Nouv. Journ. de Med. vol. ii. p. 320.

prevent M. Béclard minutely investigating the pathological condition of the parts involved.¹

A very satisfactory analogical illustration is related by Grasmeyer, in corroboration of the influence of the cause in question: In a cow which, immediately after sexual intercourse, had been gored by another animal, and died twelve days subsequent to the injury, a tumour was found containing a vesicle, which was implanted in the parenchyma of the left ovary: its membrane was opaque and strong, and inclosed a turbid puriform fluid.²

DIAGNOSIS.

AN early detection of the condition of the patient, that such measures may be adopted as shall tend to retard laceration of the envelope of the foetus, will be of the highest importance. Those of the profession who have been led to bestow some share of attention on the subject under consideration, will excuse me for entering my dissent against the *dictum* of a late veteran practitioner, who imagined that there was something so characteristic in the mere moans of the patient, that it would be sufficient for the medical attendant to hear them once, to enable him to pronounce any future case to be one of a certain variety of extra-uterine gestation. The fallacy of this opinion was verified by the melancholy fact of this practitioner, on the strength of his diagnostic, insisting on the abdomen of a woman being laid open, who was found not to be at all pregnant.³

A case occurred at Berlin in 1828, in which the section of the abdominal parietes was performed, upon the supposition of a tumour which was felt subjacent to them being an extra-

¹ Archiv. Generales, vol. xxviii. p. 208.

² Burdach's Physiology, vol. ii. p. 212.

³ Review of Heim's Posthum. Works; Brit. and Foreign Med. Rev. No. viii. p. 493.

uterine foetus; instead of which, it proved to be an accumulation of fœcal matter.¹

Although, as in other subjects pertaining to the department of midwifery, much difficulty will occasionally be experienced in establishing a diagnosis, yet assuredly in many instances which may be met with, I should unhesitatingly say, that when the patient is four or five months pregnant, the task is not unsurmountable; but at an earlier stage of gestation, although there may be some striking phenomena, yet we should not be justified in considering them infallible. The nature of the gestation is to be decided, certainly not by a reference to any single symptom, but by a strict analysis of all the most prominent features of any given case. If, after suppression of the catamenia and other phenomena of pregnancy for one or more periods, an individual were to be suddenly seized with uncontrollably acute pains in either iliac region, even antecedently to the period of quickening, accompanied by a well-defined swelling at a corresponding point, sanguineo-mucous discharges per vaginam; frequent desire for, and pain attending micturition, tenesmus, with a sense of fainting, such ailments ought certainly to warrant a practitioner in suspecting an ovarian or tubal pregnancy.² Were the uterus found in an elevated position in the pelvis, and besides this organ, an additional body detected in the same cavity, such a discovery might certainly be viewed as a corroboration of our suspicions.

When, after the presence of foetal movement cannot be

¹ Siebold's Journal, vol. ix. p. 737; Deizemeris.

² Ce chirurgien célèbre dit avoir vu deux femmes enceintes de quatre mois, chez lesquelles rien n'indiquait ce que leur état avait d'extraordinaire, si ce n'est des tiraillements fréquents dans l'abdomen et la tuméfaction irrégulière du ventre qui se portait d'un côté seulement. Elles éprouvèrent les symptômes suivants lors de la rupture des trompes : elles furent attaquées inopinément de douleurs extrêmement vives qui durèrent deux ou trois heures ; une douleur plus forte que les autres fut suivie d'un calme parfait ; le ventre s'affaissa et fut comme aplati ; une chaleur égale et douce se répandit dans la cavité abdominale ; la peau se décolora, il survint des syncopes presque continuelles ; le pouls s'affaiblit et se concentra ; une sueur froide se répandit sur toute la surface du corps, et les malades expirèrent ; Sabatier, Med. Oper. at 1^{re} edition, t. i. p. 343.

questioned, the cervix uteri is found directed towards the pubis, so much elevated in the brim, that it can be felt with difficulty, or that it cannot be reached at all, there need, generally speaking, be very little doubt as to the presence of an extra-uterine gestation. An additional support to this diagnostic is an undeveloped state of the cervix, and of the corpus uteri when it can be felt. Another point which deserves particular attention is, whether the abdominal tumefaction was observed to have commenced at one side, and whether foetal movement was remarked to have for a time occupied a corresponding point. When gestation is far advanced, and the adventitious cyst occupies a larger share of the abdominal cavity, these diagnostics cannot be relied on, though of great value at an earlier stage. In connection with the foregoing remarks, we must not overlook the importance of occasional paroxysms of acute pains, in different regions of the abdomen, as very characteristic of extra-uterine gestation. Of all the phenomena which may be particularized, none has commanded attention so frequently, as the altered position and undeveloped condition of the uterus, as may be observed in the histories of many of the cases which have been offered in illustration.

From the foregoing illustrations it may be observed, that in occasional instances extra-uterine gestation has been confounded with retroversion of the uterus;¹ but a little reflection must satisfy the practitioner, that there is a marked difference betwixt the symptoms of each. In retroversion the patient is suddenly seized with almost total inability to void urine, and with tenesmus, but inability to evacuate the rectum, and these symptoms are invariably present; while in extra-uterine gestation, although there is frequent desire, and much pain in performing these functions, yet they are never obstructed, as in retroversion; and, moreover, these complaints supervene in paroxysms, or they are present only in occasional instances. In regard to the malposition of the

¹ Vide illustrations from Krohn, *Med. Journ. Glasgow*, *Med. Comment. Ed.*, Bonnie and Messer, pages 29, 32, 60, 68, and 71, of this Memoir.

uterus, the only symptom in which these derangements strikingly resemble each other, this likewise is but occasionally felt in extra-uterine gestation, while it always happens in retroversion. We have, moreover, to remember, in reference to this last point, *first*, that the pelvic cavity, except in some very rare instances, is not at any time so completely occupied by the tumour of an extra-uterine gestation, as by the uterus in a state of retroversion; and, *secondly*, that the patient can freely evacuate the bladder when the pelvic tumour is pushed towards the sacrum.

The greatest accuracy must be observed in determining the period at which pregnancy may have commenced, so that should gastrotomy be thought advisable, we may be able to decide on the probability of the fœtus, after its emancipation, supporting a separate existence; which, by the universal consent of men of the greatest practical experience and integrity, both in this country and on the continent, cannot happen until after a residence of about *seven* kalendar months in utero. In a recent publication on midwifery, the most valuable record of cases extant in our language, containing an account of the deliveries in the Lying-in Hospital, Dublin, for seven years, amounting to 16,654, including 100 premature births, produced at periods of gestation varying from five to eight months, *none* of these immature children, except *one* at the *eighth* month, lived longer than six days.¹ Notwithstanding the opinions of men who have devoted the whole of their professional lives to the obstetric art, and such satisfactory data as those just referred to, Dr. Thomas Chalmers, Professor of Divinity in the University of Edinburgh, upon principles of obstetrics which he did not condescend to expound to his audience, and in a strain of philosophical reasoning *sui generis*, seemed to satisfy a very large majority of the General Assembly of the Church of Scotland, in solemn deliberation assembled, that the child of one of the said brethren might be viable, or support a separate existence, though born after a gestation of only 174 days. To carry conviction to the mind of the most sceptical of the Reverend Doctor's idolizing auditors,

¹ Pract. Treat. on Midwifery, R. Collins, M.D. p. 314.

there was nothing wanting but proof that the progeny of the priesthood could be reared at an earlier period of gestation than those of their lay brethren,—a doctrine which, though certainly to be inferred from the decision of the venerable court on the occasion in question, the Reverend Doctor did not venture openly to assert.

On the case alluded to, the editors of the *Med. Chir. Review* remark, “that the philosophical opinions of Drs. Alison and Christison will sooner or later become the rule with the profession, viz. that a viable child may be born between the fifth and seventh months of utero-gestation.”¹

These learned jurists, be it remarked, lay claim to no peculiar philosophical light, but simply state, that “*in all probability* such an incident happens often enough,” &c. Now it must unquestionably appear to any modest reasoner, such, for example, as the barrister, dealing only with matters of fact, an astounding leap on the part of the reviewer, to discover, in the ever-changing opinions of two members exercising a conjectural art, and who admit having had no practical experience on the subject, grounds for rejecting the conclusion which all sound observation points at, and which these speculative philosophers chuse to disregard, simply because they happen to have read some fabulous stories too wonderful for ordinary belief, and can discover no sufficient reason, either anatomical or physiological, (one of them having purposely dissected a single premature foetus!) why a foetus of from five to seven months should not live. Can the reviewer assign any satisfactory reason for many of the phenomena connected with life and death, except that in certain circumstances certain results are found to follow? And if we cease to rely on the general uniformity of nature, do we not abandon the safest guide of human conduct and opinion for the mazy regions of mere conjecture? The revolution of the earth and of the seasons—the effects of vice and virtue—all moral and physical events, must alike become matters of uncertainty, if from past experience we are not to judge of and rely on the future.

¹ *Med. Chir. Rev.* No. 62, p. 443. October 1839.

To find philosophy in such conjectures as those alluded to, is unquestionably a grand discovery on the part of the reviewer, and scarcely less miraculous than the viability of a child born at five months' gestation, to which I shall take the liberty of adding that other delicate question, by no means too difficult to be solved by those who substitute for philosophic reasoning a pompous dogmatism, viz. the birth of a child, which, during the space of five months, had acquired, by some peculiar grace, the limbs and sinews of a child of eight.¹

As we might be encouraged to have recourse to gastrotomy by the prospect of emancipating a living child, this essential point must be determined chiefly by the careful application of the stethoscope. The declarations of the parent, that she is conscious of foetal movement, cannot be relied on; since it must be well known to practitioners, that females often persist in stating that they have been sensible of the motions of the child to within a few hours, or indeed minutes, of its birth; while, from the degree of decomposition which it then exhibited, no doubt could be entertained that life must have become extinct several weeks previously. Violent foetal struggles, preceded or followed by rigors and expulsive efforts, and thereafter total cessation of motion, are proofs of the extinction of foetal life that will rarely deceive a practitioner. When these are followed by diminished tumidity of the abdomen, the secretion of milk in the mammæ, and the return of the catamenia, another conclusion may be drawn with equal certainty, viz. that the gestation is extra-uterine.

¹ It is stated by the Right Honourable Earl Spencer, in a record of the various particulars of the births of 764 cows, that no calf was reared when born at an earlier period than 242 days; Journ. English Agricult. Soc., vol. i. part 2, p. 165.

PROGNOSIS.

FROM the protracted, and often severe sufferings inseparable from gestations of this nature, there can be no hesitation in pronouncing the situation of a patient to be a most critical one, whatever may be the ultimate result. The danger is greater in the early than in the advanced stages of such gestation, since there will be less impediment to the flow of blood when the envelope of the foetus is lacerated, whatever be the variety of misplaced gestation. As may be gleaned from the preceding records, ovarian and tubal cases, from the cyst being prone to early laceration, are attended with greater risk to the patient than the ovario-tubal variety.

There is every reason to believe, however, that some individuals have recovered, even where laceration of the cyst happened at an early stage of gestation; and the following highly interesting case, related by Dr. Ingleby, seems, in so far as symptoms can be relied on, satisfactorily to support this inference: A lady six or seven weeks pregnant, was suddenly seized, soon after retiring to bed, with abdominal pain, succeeded immediately by a pallid countenance, a constant sense of fainting, an indistinctly perceptible pulse of 160, vomiting, and the most alarming collapse of the vital powers. There was no irritation of the bowels; but above the brim of the pelvis, to the right side, there was distinctly to be felt circumscribed tension, and a sense of induration, which did not exist previous to the attack. The inference, that the foregoing symptoms originated in laceration of a tube or other envelope of an extra-uterine foetus, derived considerable support from the discharge per vaginam two or three days thereafter, of a sero-sanguineous fluid, not unlike the lochia; and on the fourth morning after the attack, of the extrusion of a substance resembling the decidua. The uterus felt distinctly larger than the unimpregnated organ. Although the strictest caution was observed, yet neither foetus nor membranes were observed to pass per vaginam. The patient gradually recovered, and the abdominal tension progressively subsided;

the catamenia re-appeared at the end of the month, impregnation followed; and the individual was delivered at the natural term.¹

Violent pains returning by paroxysms in different regions of the abdomen, demand a cautious prognosis, since these are sure evidences of inflammatory action.² Hæmorrhage from the rectum or the vagina,³ a portion of intestine protruded in either direction,⁴ or from a breach in the parietes of the abdomen, or general depression of the living powers, are formidable occurrences. The most favourable manner in which these cases can terminate, is by the evacuation of the foetal structures, either by an opening in the anterior walls of the abdomen, or per rectum; since we often have it in our power to abbreviate the sufferings of the patient, by dilating the breach, and aiding in the extraction of the decomposed structures. This mode of termination is certainly preferable to the retention of the foetus, which must cause many complaints, from the effects of mental anxiety alone, and which, except in some rare instances, have been followed by protraction of the sufferings of the patient, and many distressing consequences. A very guarded prognosis is required where the opening in the abdominal parietes has been extensively dilated, gastrotomy performed, the foetus extracted, by an incision through the walls of the vagina, or hectic fever is esta-

¹ Med. and Surg. Journ. Edin. vol. xliii.; Med. and Phys. Journ. Lond. vol. lix. p. 377; left tube ulcerated for about an inch, from the bursting therefrom of an ovum of three months, which accident the patient survived from September 1827 to February 1828, when a foetus of eight months was found in the abdomen.

² Gifford, case 157; Hist. Acad. Roy. des Sci. 1716; Manget. Theat. Anat. vol. ii.; Journ. Gen. de Med. Chir. et Pharm. vol. xxvii.; Dr. A. Smith's case, Memoir, p. 56; Evesque, Memoir, p. 64; Madame la Chapelle, vol. iii.; Messer's case, Memoir, p. 68; Med. Chir. Trans. Lond. vol. vi.; Journ. de Med. &c., vol. viii.

³ Case of S. Smith, Esq., Memoir, p. 61; Med. Annals, Ed. vol. iii. p. 379; Med. Chir. Trans. Lond. vol. v.; Journ. Med. Chir. Pharm., &c. vol. xviii.; Journ. des Savans, an. 1722, p. 646; Bullet. des Sci. Med. November 1809; Phys. and Lit. Ess. Edin., vol. ii. p. 273.

⁴ A yard of intestine protruded, and sloughed off on the twelfth day, when the woman died; Med. Journ. Lond. vol. vi.

blished. The practitioner requires to deliver his opinion with extreme caution, where, during the retention of the fœtus, inflammatory action has arisen, either in consequence of violent exercise or external injuries.¹ Under all circumstances, females of a sound constitution have a better chance of recovery than those of feeble stamina, or suffering under any other organic disease.

The following remarkable case is a good illustration of what may be expected from the powers of nature in a sound constitution. A Polish peasant, aged about thirty years, and the mother of nine children, most of whom were still-born, conceived for the tenth time: this gestation was not attended with greater inconvenience than her former pregnancies, and labour supervened at the natural term. The pains were followed by the ordinary quantity of watery effusion, and by a sense of tearing in the interior, after which the efforts at expulsion ceased, as also fœtal movement. There was no effusion of blood from the vagina. After various and protracted complaints, the abdominal tumour, in the umbilical region, became painful and inflamed; and a breach ultimately formed which gave exit to purulent matter, and all the bones of a fœtus. During this process, the patient received no medical aid; and frequently no assistance except her own, in dressing the sore. She ultimately recovered, but with an artificial anus.²

¹ Med. Journ. Glasgow, vol. iii.; Journ. Med. and Chem. Sci. Dublin, vol. ii.; Annals of Med. Edin. vols. ii. and iv.; Med. Phys. Journ. Lond. vol. lix.; Brit. and Foreign Med. Rev. No. xiii.; Mem. de l'Acad. Roy. des Sci. 1702; Repert Gener. d'Anat. et de Physiol. Pathol. vol. i.; Dr. Duncan's case, p. 90 Memoir; Med. Repos. Lond. vol. vi.; Watson on Homicide; Phil. Trans. vol. iv.; Med. Journ. Lond. vol. vi.; Med. Surg. Journ. Edin. vol. xlii.; Med. and Phys. Journ. Lond. vols. 37, 59; Recueil des Act de la Soc. de Sante de Lyon, 1798.

² Rust's Magazine, vol. xix. No. 2; vide page 57 of this Memoir, the extraordinary case of Noon, who, after the removal of twin extra-uterine fœtuses by an opening in the parietes of the abdomen, produced, after seven natural gestations, an equal number of living infants. Consult also Lond. Med. Journ. vol. viii. p. 335, Dr. Underwood's case, in which, after a fœtus had been retained seven years, the same patient conceived a second time. When the first had been retained twenty-one, and the second fourteen years, the evacuation of fœtal bones commenced per rectum, which process continu'd eighteen years more, and the woman died.



TERMINATION.

As cases of misplaced gestation frequently terminate in rupture of the cyst and consequent sudden death of the patient, it will be necessary, as a preliminary inquiry, to consider the causes which occasion these accidents. These may either be inherent or accidental. Undue action of the abdominal muscles, and the co-operation of the diaphragm, by contracting upon their subjacent viscera, must tend to injure the cyst. Upon this principle, artificial vomiting, straining at the night table, sudden and forcible extension of the trunk, and lifting heavy bodies,¹ may all be considered very influential causes, after the parietes of the cyst have been attenuated by distension. Among the extraneous circumstances which may conduce to laceration of the envelope, injuries upon the abdomen, arising either from ordinary occurrences,² or from delicate causes,³ may be particularised.

The inherent causes are more or less constantly in operation, and may, especially after considerable distension of the cyst, when this is formed by an ovary or tube, speedily accelerate the laceration, without our having any satisfactory evidence of the cause. A very efficient cause is the naturally

¹ Trans. for the Improv. of Med. Chir. Knowl., vol. i. p. 216, accident happened after the exertion of using a warm bath. In Mr. Darby's patient, pains commenced when she was in the act of turning in bed, page 90 of this Memoir.

² Journ. de Med. Pharm., &c. vol. 14, after artificial vomiting. Med. Annals, Ed., vols. ii. and iv. after kicks upon the abdomen. Med. Annals, Ed. vol. vii., after active exercise. Med. and Phys. Journ. Lond., vol. xxix., after a blow upon the left side. Vol. lix., same work, after unusual exertion in drawing water from a deep well. Lond. Med. Repos. vol. vi., after active exercise. Lond. Med. Journ., vol. vi., after violent exercise. Dublin Med. Journ., vol. xi., after a severe blow upon the pubes. Glasgow Med. Journ., vol. iii., after blows in a conflict with another woman. Case in Royal Infirmary, Edin., p. 90 of this Memoir, after corporeal injuries. Watson on Homicide, p. 91, after kicks upon the abdomen.

³ Med. Chir. Trans. Lond., vol. vii., died seven hours after sexual intercourse.

rapid development of the ovum. By some writers the injury has been supposed to consist in inflammation and sloughing¹ of the cyst; by others, in mechanical laceration;² and as some cases have been met with in which the breach would only admit the point of a surgeon's probe, and others in which the rent was extensive, both these opinions must be correct. Whence it happens that a cyst of adventitious formation, as in ovario-tubal gestations, is not so prone to injury as one formed of the ovary or tube, since the structure is more delicate than these, I cannot pretend to decide. The rapid effusion of blood from the injured structures must be the principal as well as the immediate cause of death; but we are not at the same time to overlook the influence of other circumstances, as the exhaustion of the patient by her previous sufferings, the effects of extensive inflammation so frequently observed, and the extreme constitutional derangement abruptly excited by an injury so severe, of an organ engaged in the performance of what may almost be considered next in importance to a vital function. In fatal cases of laceration of the uterus, the consequent loss of blood is not alone sufficient, in many instances, to account for death; but when, as generally happens after rupture of the cyst of an extra-uterine foetus at an earlier stage of gestation, we find from four to eight pounds of blood effused, we are saved the trouble of speculating on the cause of the catastrophe, or of calling in the aid of collateral circumstances to account for what may have happened.

When the patient has survived rupture of the cyst, the termination will depend on the degree of irritation which has been excited, the treatment which the case has received, and the prudence of the patient. Occasionally, as may be gleaned from the foregoing pages, the foetus may continue for a long series of years in the abdominal cavity,³ with little inconve-

¹ Burns' Princip. of Midw.

² Langstaff, Med. Chir. Trans., Lond. vol. vii.

³ Phil. Trans., vol. ii., 26 years; Miscell. Nat. Cur. An. 3, obs. 23, 11 years; Act. Acad. Theod. Palat., vol. ii., 55 years; Phil. Trans., vol. vi. p. 500, 46 years; vol. viii, p. 488, 9 years; also same work, vol. ix. p. 37, 6 years;

nience to the patient, except a feeling of unusual weight; and she may not only enjoy a large share of good health, but even conceive, and repeatedly bear children during the retention of the extra-uterine foetus.¹ In the meantime, the extra-uterine foetus and its cyst, as will be particularised in speaking of the pathology of the ovum, undergo various mutations. When the foetus and the other parts of the ovum have been dislodged from their envelope, they may then excite violent inflammation of the ambient organs, which, with hæmorrhage, may destroy the patient;² or the excitement may assume a chronic form, or be modified by treatment; or suppuration with hectic may ensue, and the decomposed structures be evacuated by apertures in the vicinity of the umbilicus;³ per anum, in consequence of a communication with the

Hist. de l'Acad. Roy. des Scien., 1721, 48 years; Med. Chir. Trans. Lond., vol. v., 52 years; Boston Magazine, U. S., 14 years; Hist. de l'Acad. Roy. des Sci. 1748, part 1, 31 years; Denman's Engravings, 32 years; Sandifort, lib. ii., 22 years; Journ. de Med. Chirurg. et Pharm., vol. lxxv. 33 years; Edin. Med. and Surg. Journ., between 30 and 40 years; another case, same volume, foetus retained 26 years; Lancet, vol. i., 1835-36, case known to Dr. Ramsbotham, foetus retained 20 years; Professor Maunsell's case, Mem. p. 95, 20 years; Baruthi, 1722, 46 years; Lond. Med. and Phys. Journ., vol. xxxv., 8, 14, and 17 years.

¹ Phil. Trans., vol. vii., one child produced; Hist. de l'Acad. Roy. des Sci., 1721, 2 children; Halleri, Disput. Med. vol. iv. p. 798; Med. and Surg. Journ., vol. v. p. 337, produced a living child while discharging the bones of an extra-uterine one; Lancet, vol. i. 1835-36, 3 children; Lond. Med. Phys. Journ., vol. xxxv., 3, 4, and 6 children.

² Miscell. Nat. Curios., Dec. 2, An. 2, p. 447; Boehmeri, obs. Anat. Rar. Fasc. I.; Journ. de Med. Chirurg. Pharm., &c. vols. v. and xxxix.; Med. Comment. Edin., vol. xi.; Journ. de Med. Chirurg. Pharm., &c. par Corvisart, &c., vol. xxvi.; Med. Journ. Dublin, vol. xi.; Med. Journ. Glasgow, vol. iii.; Dr. A. Smith's case, p. 56 of this Memoir; Case of S. Smith, Esq. p. 61 of this Memoir; Case of A. Messer, Esq. p. 68 of this Memoir; Dr. King's case, p. 75 of this Memoir; Bonnie's cases, p. 65, 70, and 72 of this Memoir; Evesque, p. 63 of this Memoir.

³ Miscell. Nat. Cur. An. 3, obs. 23, 1695; Dec. 3, An. 4, obs. 87, 1696; Phil. Trans., vols. iv. ix. x.; Ruleau on Cæsar. Sec. p. 10; Manget. Theat. Anat., vol. ii.; Med. Ess. Ed., vol. v. An aperture formed in the abdominal parietes by gangrene, which also extended to the uterus; the foetus escaped from the organ, and the patient recovered, Paduan Comment., Burn's Princip., p. 233. A fluid resembling catamenia flowing from the fistulous wound at each menstrual period, for several years after the removal of the foetal bones, Med.

colon or rectum;¹ or per vaginam, the least frequent outlet of the three.² In some rare instances, owing to ulceration of the parietes of the bladder, foetal bones have been known to pass into that viscus, of which the following is a remarkable illustration.³ A matron, aged forty-seven, second pregnancy. Until the seventeenth week of her gestation, the catamenia for the most part appeared regularly. At first pausea, vomiting, and constipation, with foetal movement at the usual period. In the latter half of her pregnancy she was seized with violent colic, and most excruciating pain in the abdomen, and while in this state she was thrown upon a bed by a female attendant; after which, on the right side of the umbilicus she felt a very unpleasant sensation whenever the foetus moved, followed sometimes by spasms almost to the toes. In the thirty-seventh week she complained of violent pains with shivering, and a sense as if the bowels were drawn downwards. Abdomen became more tumid, followed by excruciating pains, ending in paralysis of the right lower limb, which continued three weeks. From this period foetal movement ceased, and the patient continued indisposed, but the mammae became distended with milk. In the fifteenth month a grumous dis-

and] *Phys. Journ.*, vol. lviii. p. 314; *Med. Comment. Ed.*, vol. ii. p. 72, and vol. xvii.; *Med. Journ. Lond.*, vols. vi. and viii.; *Sprengel, Hist. de Med.*, vol. vii.; *Trans. Med. Chir. Knowl.*, vol. ii.; *Med. Fac. and Obs.*, vol. i.; *Med. Annals, Ed.*, vols. ii. and iv.; *Med. and Phys. Journ. Lond.*, vol. xxxv.; *Med. Chir. Rev.*, vol. x.; *Med. and Phys. Journ. Lond.*, vols. xlix and lviii.; *Brit. and For. Med. Rev.*, vol. iii.

¹ *Phil. Trans.*, vols. iv. vii. ix.; *Giffard's cases*, No. 157; *Med. Comment. Edin.*, vols. ii. v. xviii.; *Halleri, Disput. Med.*, vol. iv.; *Langius, Halleri*, l. c.; *Camper. Anat. et Pathol.*, tab. 2; *Journ. de Med. Chir. Pharm., &c.* vols. xviii. xxxix.; *Med. Journ. Lond.*, vols. v. viii.; *Med. Chir. Trans. Lond.*, vol. v.; *Med. Annals, Ed.*, vol. vii.; *Med. and Phys. Journ. Lond.*, vol. xi.; *Bonnie*, p. 73 of this Memoir; *Brit. and For. Med. Rev.*, No. 13, 1839; *Journ. de Med.*, 1786; *Revue Med.*, vol. x.

² *Camper*, l. c.; *Marcel. Donat. de Med. Hist. Mirab.*, lib. iv. c. 22; *Horstii Opera*, tom. ii. p. 536.; *Benevoli, Dissert.* p. 104; *Archiv. Gen. t. x.*, 2 Ser. p. 488; *Phil. Trans.*, vol. iv. p. 303, by the anus and vagina; *Med. Chir. Trans. Lond.*, vol. v.; *Dr. Loudon's case*, p. 65 Mem.

³ *Med. Journ. Lond.*, Nov. 1800; *Journ. Gen. de Med.*, vol. xiii.; *Sprengel, Hist. de Med.*, vol. vii.; *Stalpart, Van der Wiel Opera*, vol. i. p. 305; *Ronseus, Epist. Med.*

charge appeared per vaginam; and in about a month thereafter, the catamenia recurred at irregular periods until her decease. Her health occasionally improved, and excepting frequent pains in the abdomen, and a sense of pressure on the bladder, she felt tolerably well, and continued so nine years. After this she had several violent frights, followed by severe shivering and colic, ending in general excitement, and pains like those of labour. From this period the urinary organs became seriously deranged. After three years a hard body was felt in the urethra; and shortly thereafter a small stony concretion, and subsequently a bone resembling the tibia of a foetus passed by the urethra. Many other stones and bones passed in succession, and at last it was resolved to evacuate the bladder by an incision through the abdominal parietes, and in three days after the operation the woman died. The uterus was of its natural size, and healthy; the left tube and ovary were in a similar condition; but the same organs on the right side could not be discovered. The patient was in this state of torture for thirteen years.¹ Ovarian and tubal gestations have sometimes terminated in dropsy,² and the former of these varieties in a confused mass in which a few only of the foetal organs could be recognized.³

¹ Med. Phys. Journ. Lond., vol. xiv. p. 519.

² Buchner, Annal. Liter., Gœtting., 1786; Trans. Roy. Irish Acad., vol. i. p. 80; Med. Comment. Ed., vol. ii.; Hist. Acad. Roy. des Sci., p. 32, 1716; Roederer, Elem., c. xv. sect. 758; Med. Eclairée, vol. iv. p. 65; Lancet, vol. i., New Ser., 1835-6.

³ Right ovary in a girl, aged eighteen, contained hair, teeth, a mass exhibiting the appearance of eyelids, Hist. de l'Ancien. Acad. Roy. des Scien., vol. ii. p. 91.

PATHOLOGY.

UNDER this head will be considered, *first*, the changes experienced by the various parts which compose the ovum, including its adventitious envelope; and, *secondly*, those which may be observed in the organs of the parent.

When the ovum has not been lodged either in an ovary or tube, an envelope, except in some rare instances, is superadded. Dezeimeris, however, does not admit this to happen, except in his fictitious *sub-peritoneo-pelvic* variety, and in an ovum which has been dislodged from an ovary or tube, and which he denominates *secondary abdominal*. The pathology of books is one thing, and that of the dead body another; and, accordingly, in the case published by Patuna, where no doubt could be entertained that the ovum had originally been contained in the right tube, and therefore constituted one of Dezeimeris' secondary abdominal variety, no cyst was to be found;¹ while, again, in the illustrations with which I have been favoured by Dr. A. Smith, Mr. Messer, and Dr. King, there was a cyst in all of them,² contrary to the opinion of Dezeimeris; and neither of these three was enveloped in the peritoneum; nor was there the slightest evidence for supposing that they had been detained in the ovary after impregnation, or that they had ever been lodged in the tube or uterus.

The form of the adventitious cyst resembles that of the uterus in the latter months of gestation. Usually it contracts numerous adhesions with the ambient viscera, and these are in some measure regulated by the original position of the ovum, which, as in Dr. King's case, may be situated anteriorly to the uterus; or posteriorly to it, as in that of Mr. Messer.

¹ Sandifort's Thesaurus, loco jam citato.

² Memoir, pages 56, 68, 75; La Croix, Med. Eclairée, t. iv. p. 349; Med. Surg. Journ. Lond., vol. ii. p. 65.

When in the former situation, it may cohere to the urinary bladder, inner surface of the brim of the pelvis, and to the anterior surface of the uterus and of the broad ligaments, as is satisfactorily seen in the preparation sent me by Dr. King; while in the one obtained from Mr. Messer's patient, the cyst cohered to the posterior aspect of the uterus and of the broad ligaments. And whether the ovum has originally been placed in the anterior or posterior chamber of the pelvis, as its volume increases, and its envelope extends, the latter may, as in these two cases, form adhesions with the spine, omentum, mesentery, intestines, the peritoneal lining of either iliac region, and even with the liver and stomach. Are the decomposed foetal structures most likely to be evacuated through the anterior parietes of the abdomen, where the ovum has been placed between the uterus and the urinary bladder; and *per rectum*, where the ovum has been situated betwixt this last organ and the uterus?

The colour of the external surface of the cyst varies at different points, from light to dark blue; the parietes vary in thickness in different parts, from one to several lines: in Dr. King's case some portions of the envelope were so attenuated, that they were preserved with difficulty. Some parts of the walls of the cyst in Mr. Messer's case were half an inch thick; and this is usually observed at the point to which the placenta is attached. Though, generally, the blood-vessels of the cyst, except where the placenta is adherent, are neither large nor numerous, yet in some instances met with by Baudelocque, this envelope was highly vascular, as was also the case in that of the example communicated by Dr. Smith. Whether the parietes of the cyst be naturally soft, or this mollescence be the effects of inflammation principally, I will not hazard an opinion; but they were notably so in the cases of Dr. Smith, Mr. Messer, and Dr. King.

In ova supposed to have been originally, after their separation from the ovary, lodged in the peritoneal cavity, the cyst has been usually admitted to be generated by lymph effused from the surface of the ambient viscera in consequence of the irritation excited by the presence of the product of concep-

tion; and by a similar process also, nature may, sooner or later, generate an envelope for the foetus where it has not originally been lodged in the abdominal cavity, but where it has burst into it from the ovary, tube, or uterus. As properly remarked by Dezeimeris, and already slightly alluded to in speaking of the symptoms of ovario-tubal cases, there is reason to believe that both in ovarian and tubal gestations, rupture of the cyst is sometimes averted, and the ovum preserved by a natural process, viz. the cohesion of the over-distended, and consequently excited envelope, whether tube or ovary, to the ambient structures; and hence, incrassation of, and increased resistance by, its parietes. By an analogous process, or an effusion of blood or lymph, a trifling breach in the cyst even, may be repaired.

As already remarked, Dezeimeris denies the generation of a cyst, in what he styles primary abdominal ova, since the product is at first so small, so pliant, and so delicate, that it cannot occasion excitement; and since, were it by its presence to produce inflammation, its destruction would inevitably follow. This opinion, as to the non-existence of an envelope in the variety of misplaced gestation last named, I have already proved not to be well founded. Although it is my belief that the ovulum, unless received by the tube, after its *complete* separation from the ovary, will perish; yet if its organic relations with either of these organs have not been dissolved, there cannot be a doubt that its evolution will advance, and that it may even be matured, notwithstanding the excitement which its presence may produce, and which, from its small size, pliancy, and delicacy, cannot certainly be appreciable at first; but it by no means follows that it will not excite irritation after its volume increases. That it has this effect in a very large majority of cases, if not to some extent in all, is satisfactorily proved during life, by the severe and frequent paroxysms of abdominal pains attendant on all varieties of misplaced gestation; and after death, by the numerous adhesions and other morbid changes discovered on dissection; and if in occasional instances a cyst has not been discovered, this is to be explained, not by supposing that none had ever

been generated, but rather by admitting its formation, and subsequent decomposition in consequence of its having been ruptured, or having suffered some pathological change. Dezeimeris himself, indeed, admits these alleged alterations. In cases of long detention, the cyst has been known to experience various changes; it may be converted into a substance resembling adipocere,¹ calcareous matter,² stone,³ cartilage,⁴ or bone.⁵

When an opportunity is afforded of examining the ovum soon after the extinction of foetal life, the membranes and placenta are most generally to be discovered; but sooner or later decomposition commences, and they disappear. In some rare instances, indeed, where very little time was supposed to have elapsed betwixt the death of the foetus and that of the parent, and where, after the latter event, an examination was early made, no part of the membranes, except what covered the concave surface of the placenta, remained.⁶ In misplaced gestation the chorion, amnion, and funis, present the same appearances as in natural pregnancies. In regard to the cord, it may be long, as in the case communicated by Dr. Smith, in which it was $34\frac{1}{2}$ inches; or short, as in the example met with by Mr. Messer, in which it measured only five inches.

Although the placenta occasionally resembles the same organ in uterine ova, yet in many instances it differs remarkably. In size it sometimes extends over a very large surface,⁷ contracting adhesions not only with the uterus and its

¹ Bianchi de Natura in Humano Corp., &c. p. 166; Med. Chir. Rev. Lond., vol. x. p. 223.

² Denman's Engravings; Cruveilhier, Anat. Pathol. Malad. des Ovaires Lin. xviii.

³ Cordæi, Comment. in Lib. prior. Hippocrat. de Muliere, p. 740; Sandifort, lib. ii.; Sprengel, Hist. de Med., vol. vii. p. 290.

⁴ Hist. Acad. Roy. des Sci., 1748; Journ. de Med. Chir. et Pharm., &c. vol. lxxv. p. 1785; Med. Journ. Glasgow, vol. iii.

⁵ Hist. Acad. Roy. des Sci., 1721; Haller, Disput. Med., vol. iv. In the American Med. Journ., May 1828, is the case of a negress who retained a foetus in an ossified cyst forty years; Med. Chir. Trans. Lond., vol. v.

⁶ Sandifort's Thesaurus, Patuna's case.

⁷ Towards the left side, adhering to the left ovary and corresponding broad ligament, and extending to the sigmoid flexure of the colon, was a spongy, red-

appendages, but with the peritoneal lining of one or both *iliac* regions, the lumbar vertebræ, the transverse arch of the colon, the omentum, and even with the stomach and liver.¹ Generally it is so thin as to possess little more substance than a membrane, and consequently not very vascular;² while in some rare instances again, it has been found several inches in thickness,³ and abundantly supplied with blood-vessels. In consistence it is usually soft, but it may be much indurated,⁴ or even converted into cartilage or bone.⁵ The unusual expansion of the placenta, and its adhesion, through the medium of the cyst, to the colon, or other parts distant from the organs of reproduction, will perhaps in some degree explain the belief of some of the profession in the reality of ventral extra-uterine gestation; but, as formerly stated, its existence is incompatible with the principles of sound physiology. Until a case can be produced in which neither an ovary nor a tube is involved in the adventitious cyst, we are justified in withhold-

disb, delicate mass, somewhat partaking at particular points of the structure of a false membrane, or of the placenta, and easily lacerated, *Nuov. Journ. de Med.*, vol. ii. It was twice as large as might have been expected, *Med. Obs. and Inquir.* vol. iii.

¹ Le Placenta étoit attaché à l'os sacrum, au deux dèrnièrs vertebrès des Lombes, &c., *Mem. de l'Acad. Roy. de Chirurg.*, vol. v. Le Placenta s'attachoit sur la 1^{re}, 2^{de}, et 3^{me}, vertebres des lombes, *Hist. Acad. Roy. des Sci.*, p. 32, 1716. La Placenta adheroit fortement à la colonne vertébrale et à la moitié supérieure du sacrum, *Journ. Complement.* vol. vi. p. 259; *Œuvres de Duverney*, vol. ii. p. 363. It sent off filaments from its reflected portions to the peritoneum, stomach, liver, intestines, &c., *Mem. Med. Soc. Lond.*, vol. iii. The Placenta adhered to the stomach, colon, and gastro-epiploic vessels, *Journ. des Savans*, 1678.

² The Placenta was so extremely delicate, and possessed so little of its natural characteristics, that at first view, I conceived it to be a thin membranous substance; its vessels were exceedingly small, *Mem. Med. Soc. l. c.*; *Archiv. Gen. de Med.* vol. xvii. p. 344.

³ Dr. King describes the Placenta, in his case, as being very thick and much expanded. In Dr. Smith's case, it weighed 2 lbs. 14 oz. The Placenta was much expanded, and weighed 5 lbs., *Med. and Phys. Journ. Lond.*, vol. lix.

⁴ In his description of the Placenta, Dr. King says, that it was as dense as a hepatized lung. In one of Dr. Inglehy's cases, the Placenta was small and firm, *Med. Surg. Journ. Edin.*, vol. xlii.

⁵ The Placenta was partly converted into cartilage, and partly into bone, *Hist. Acad. Roy. des Scienc.*, 1748.

ing our belief in the existence of ventral extra-uterine gestations.

I am indebted to the kindness of Dr. Edward Murphy, of the Lying-in Hospital, Dublin, for the following description of the placenta, in his case of extra-uterine gestation, inserted in the fifteenth volume of the Dublin Journal of Medical Science, 1839:¹ "The vessels of the funis were ramified separately, over a membrane which enclosed a globular mass, that was soft, easily broken, and in the centre contained several clots. It seemed as if the placenta was pushed forward, in consequence of hemorrhage, into the cyst; the clots were distinct only at the centre; and the mass, for about an inch in depth around its circumference, was of the usual fibrous texture; but betwixt this structure and that which resembled coagula, there was no distinct line of demarcation, for the vessels of the former were lost in the softened texture, which was about four inches in diameter." In the foregoing case it may be inferred that the placenta was diseased, and separated from the cyst during the expiring struggles of the foetus and those of the parent.

Evolution is subject to the same irregularities in extra-uterine as in natural gestations; for the foetus may be indifferently or fully developed; and it may, though rarely, present some defects of organization. During its retention, it experiences changes as varied, and fully as remarkable, as those of the other structures of the ovum.

The misplaced position of the foetus, though the contrary has been asserted,² does not appear invariably to retard its evolution, as is satisfactorily proved by the illustrations which have been recorded by Courtial,³ Bonetus,⁴ Bian-

¹ Note, p. 95 of this Memoir.

² Ryan's Compend. p. 445. En effet, l'expérience apprend que les enfans conçus dans ces voies extraordinaires sont, en général, plus frêles; Gardien, Dict. des Scien. Med. vol. xvii. p. 559.

³ Ce petit corps pesoit huit livres de 16 onces chacune, Journ. des Savans, vol. vi. p. 305, 1678.

⁴ Puellus egregius et optime formatus, Anat. Sepul. Lib. 3, Sec. 48, Obs. iv.

chi,¹ and Patuna. In the case published by the latter author, the development was so remarkable, that it is stated the foetus almost equalled the size of a child at two months after birth.² Dr. Smith describes the foetus in his case as full grown; and although, in Mr. Messer's case, the foetus had neither been measured nor weighed, yet judging from its appearance, it could not have been less than 5 lbs.; that in Dr. King's,³ it will be recollected, was 21 inches in length, and 5 lb. 4 oz. in weight. Dr. Ingleby concurs in opinion with the foregoing authorities, and gives a satisfactory illustration in support of his belief.⁴ Myddleton relates an instance in which he discovered defects in the arrangement of the osseous structure of an extra-uterine foetus;⁵ and Muller one in which several of the organs were wanting.⁶

Decomposition of structure is the most frequent change to which the foetus is liable. This may happen in a few weeks or months after the extinction of its life, or not for some years,⁷ during which the mass, surrounded by its cyst, may

¹ In the body of a female examined at Turin in 1728, was found an extra-uterine foetus, which weighed 8 lbs.; Bianchi de Natur. hum. corp. vitios. &c. p. 166.

² Sandifort's Thesaurus, l. c.

³ Mem. pp. 56, 68, 75.

⁴ Med. and Surg. Journ. Edin. vol. xlii.

⁵ The inferior maxilla was consolidated with the os temporis and upper maxilla; and six of the ribs, with their corresponding vertebræ, were united into one bone; Phil. Trans. vol. ix. p. 113.

⁶ Curiosissimum in hoc embryo fuit, quod ne minimum quidem vel partium genitalium, vel orificii ani, adfuerit vestigium, inque regione pubis præternaturali modo prodierit Funiculus umbilicalis. Extremitas tubæ Fallopiæ matris prope fimbrias præter naturam angustior erat, ut nec stilum, etiam minimum, nec flatum, admitteret; de foetu monstroso, in tuba Fallop dextra concep, &c.; Act. Nat. Cur. obs. 152, p. 511.

⁷ Phil. Trans. vol. iv. ix. and x.; Hist. Acad. Roy. des Sci. 1702, 1776; Langius, lib. ii.; Fabric. Hildan; Præfect's cases, vol. ii. p. 187; Manget. Thesaur. Anat. vol. ii. p. 141; Tulpius, lib. iv. c. 39, p. 358; Cyprianus Epist. Bianchi, l. c.; Camper, Anat. Pathol. l. c.; Miscell. Nat. Cur. Dec. 3, An. 3, obs. 23, 1695; Journ. de Med. Chir. Pharm. &c. vol. xviii.; Med. Ess. Ed. vol. v.; Med. Journ. Lond. vol. viii.; Med. Phys. Journ. Lond. vols. xi. xiv. xxxv.; Med. Comment. Ed. vol. v. 17; Med. Ann. Ed. vol. ii. iv. vii.; Archiv. Gen. vol. xii.; Obstet. Med. vol. ii. p. 947.

continue dormant for the remainder of a long life,¹ not only without occasioning much inconvenience, but without interfering even with the functions of the organs more immediately concerned, or the general health of the parent, who may not only conceive once or oftener² during the retention of the extra-uterine foetus, but bear such children without any additional suffering. Except in some rare instances, sooner or later, in consequence of many causes which may or may not be obvious,³ inflammation arises in the adjoining organs, involving the envelope of the foetus. When there has been a considerable proportion of liquor amnii, or much blood has been effused after the rupture of the cyst, decomposition, it may be inferred, must be accelerated, as the structures of the

¹ Phil. Trans. Lond. vol. v. retained 56 years; Acad. Theod. Palat. vol. ii. 55½ years; Med. Chir. Trans. Lond. vol. v. 52 years; Phil. Trans. vol. vi. 48 years; Hist. Acad. Roy. des Sci. 1721, 48 years; Baruthii, 1722, 46 years; Journ. de Med. Chir. Pharm. &c. vol. lxxv, 1785, 33 years; Denman's Engravings, 32 years; Hist. Acad. Roy. des Sci. 1748, 31 years; Journ. des Savans, 1678, 26 years; Med. Surg. Journ. Ed. vol. ii. 26 years; Sandifort's Thesaur. 22 years; Lancet, vol. i. N. S. 1835-36, 20 years; Professor Maunsell's Case, Mem. p. 95, 20 years. Med. and Phys. Journ. Lond. vol. xxxv. 17 years; Phil. Trans. vol. ix. 16 years; Bianchi, p. 166, 15 years; Boston Magaz. U. S. 14 years; Archiv. Gen. vol. vii. 10 years.

² Patients conceived once during the retention of the extra-uterine foetus; Albucasis, l. c.; Halleri Disput. Med. vol. iv. p. 793; Med. Chir. Trans. Lond. vol. v.; Med. Ess. Edin. vol. v.; London Med. Journ. vol. vi.; Med. Observ. and Inquir. vol. ii.; Journ. Med. Sci. Edin. No. 3, p. 223. Patients produced two children during the retention of the extra-uterine foetus; Hist. Acad. Roy. des Sci. 1721; Phil. Trans. vol. vi. Patients produced three children during the retention of the extra-uterine foetus; Phil. Trans. vol. vii.; Med. and Phys. Journ. Lond. vol. xxxv.; Lancet, vol. i. N.S. 1835-36; Med. Chir. Rev. vol. x. Patients produced four children during the retention of the extra-uterine foetus; Phil. Trans. vol. ix.; Med. and Phys. Journ. Lond. vol. xxxv. Patient produced six children during the retention of the extra-uterine foetus; Med. and Phys. Journ. Lond. vol. xxxv.

³ In consequence of frictions upon the abdomen ordered by a quack, Phil. Trans. vol. iv. Violent straining in endeavouring to lift a heavy cheese, Recueil des Act de la Soc. de Sant de Lyon, 1798. In consequence of going on a journey upon a jolting horse, Journ. de Med. Chir. et Pharm. &c. vol. xiv. In consequence of jumping over a hedge, Med. Journ. Lond. vol. vi. Among the foregoing causes, irritation arising from subsequent gestations and their consequences, may be added.

foetus are softened or macerated in these fluids or in pus. Removal of the decomposed structures through the walls of the abdomen, the rectum, or the vagina and urinary bladder, in some rare instances, may be accomplished in a few months,¹ or may require several years.²

It is very remarkable, however, that in occasional instances these structures, so far from suffering decomposition where the foetus had been retained for a long series of years, some of them had, on the contrary, not only appeared as sound as if life had become extinct but a day or two before,³ while it was no less obvious that others had even advanced in their development.⁴ In other examples, after protracted retention, the foetal structures have been changed into a fatty substance, such as has sometimes been discovered in sepulchres;⁵ or they have become callous, from their fluids having been entirely absorbed;⁶ or they have been converted into cartilage or bone;⁷ or the foetus has been much reduced in volume, and become a petrefaction.⁸

It now only remains, that the changes experienced by the reproductive organs during extra-uterine gestation should be particularized; since those which affect the abdominal and

¹ Phil. Trans. vol. iv. 2 months; Tulpius, lib. iv. c. 39, 3 months; Med. Comment. Edin. vol. v. 3 months; Fab. Hildan, 16 months.

² Med. and Phys. Journ. Lond. vol. xi. 23 months; Med. Journ. Lond. vol. viii. 18 years.

³ Journ. des Sav. 1678; Ruysch. Thesaur. Max.; Halléri, Disput. Med. vol. iv. p. 759; Bianchi, p. 166; Cordæus in Spachio, p. 740; Denman's Engravings; Lieutand, Obs. 1740, vol. i.; Med. Chir. Trans. Lond. vol. v.; Archiv. Gen. vol. vii.

⁴ Les gencives étoit coupées, les dents ont paru de la grandeur qu'elles sont aux adultes; Journ. des Sav. vol. vi. p. 305, 1678.

⁵ Archives Generales, vol. v. p. 147.

⁶ Phil. Trans. vol. ix. p. 372.

⁷ Phil. Trans. vol. vi. p. 500; Biblioth. Med. vol. xxxiii. p. 411; Journ. de Med. Chir. Pharm. &c. vol. lxxv. p. 29; Archiv. Gen. vol. xvii. p. 297; Hist. Acad. Roy. des Sci. 1721; Lancet, vol. xv. p. 317.

⁸ Act. Acad. Theodor. Palat. vol. ii.; Mem. Acad. Roy. de Chir. vol. v. p. 36; Sandifort, lib. ii. p. 36, child indurated after 22 years' retention; Med. and Surg. Journ. Edin. vol. ii.; Journ. de Med. Chir. Pharm. &c. vol. xviii.

other pelvic viscera may be gleaned from the observations which have already been made.

As it is a law in the animal economy, that when excitement commences in a part, an increased afflux of fluids is directed towards the same point, we should *a priori* expect that the uterus, though not the immediate seat of the excitement, would, nevertheless, participate in its effects, owing to its proximity to the ovaries and tubes, with one or other of which the ovum must be organically connected; nor must we overlook the powerful reciprocal influence which the uterus and its appendages exert upon each other. The uterus, accordingly, except in some rare instances,¹ undergoes striking alterations, both in its structure and volume. Its development has been found to vary from twice the size of an unimpregnated organ² to the volume which it is known to attain when gestation is four months advanced.³ In texture it loses that firmness so characteristic of the unimpregnated organ, and becomes soft and spongy, like the gravid uterus;⁴ and

¹ Dr. Ingleby's first case of tubal gestation, *Med. and Surg. Journ. Edin.* vol. xlii.; *Med. Repos. Lond.* vol. vi.; *Med. and Phys. Journ. Lond.* vol. xxix.; *Journ. Gen. de Med. Chir. Pharm. ou Recueil, &c.* vol. xxvii.

² *Med. Chir. Trans. Lond.* vols. vii. and viii.; Dr. Ingleby's ovario-tubal case, *Med. Surg. Journ. Edin.* l. c.; Breschet's *Memoir; Archiv. Gener.* vol. x.

³ Uterus the size of one four months pregnant, *Med. Phys. Journ. Lond.* vol. lix. p. 377. Uterus as large as one two months pregnant; *Trans. Improv. Med. Chir. Knowl. Lond.* vol. i. ii. In Dr. Ingleby's second tubal case, uterus considerably enlarged; and in his third case, uterus four inches in length. *Med. Chir. Trans. Lond.* vol. xiii. uterus $4\frac{1}{2}$ inches long. In one of Breschet's cases, the uterus was from 5 to 6 inches in length. *Med. Chir. Rev.* vols. v. vi. and xv. cases in which the size of the uterus varied from that of two to that of three months pregnant. Uterus as large as one twelve days after delivery, *Phil. Trans.* vol. iv. Uterus twice the size of the unimpregnated organ, *Nuov. Journ. de Med.* vol. ii. *Trans. Roy. Soc. Edin.* vol. v., uterus twice the size of the unimpregnated organ. Uterus the size of one two months pregnant, *Obstet. Med.* vol. ii. p. 948. In Dr. Smith's case, p. 56, *Mem.* the uterus was $6\frac{1}{2}$ inches in length, and weighed eleven ounces. In Mr. Messer's case, p. 68 of this *Mem.* uterus was twice the size of the unimpregnated organ. In Dr. King's case, p. 75 of this *Mem.* the uterus was nearly six inches in length. In Dr. Murphy's case, the uterus was $5\frac{1}{2}$ inches in length, *Journ. Med. Sci. Dublin*, vol. xv.

⁴ Boehm. *Obs. Anat. Rar.* F. i. p. 27, F. ii. p. 14. The uterus was larger

in resemblance of the pregnant womb also, both its arteries and veins become not only more numerous, but also much enlarged.¹ Another interesting proof, not merely of the participation of the uterus in the changes induced by the development of an ovum in its vicinity, but likewise of the striking analogy between the condition of this organ in misplaced and natural gestation, is the formation of the decidua at first observed, not by Dr. William Hunter, as has been incorrectly stated, but by Boehmerus;² and likewise of the generation of the concrete mucus in the aperture and neck of this organ, as originally noticed by Dr. Clark.³ These productions, however, are not invariably present in all the different orders of misplaced gestation;⁴ but they are rarely wanting in examples of the tubal variety. Since, however, in cases where no decidua has been found, the uterus, as is satisfactorily proved by its being invariably more or less enlarged, must always, it may be presumed, be subject to the same influence, we are consequently warranted in concluding that these productions had been generated, and that they had been subsequently ejected on the occurrence of those sanguineous discharges which are incident to all the varieties of such gestations, or during those paroxysms of uterine excitement which

than usual, and except at its neck, its substance was spongy, Med. Trans. Lond. vol. vi. The tissues of the uterus were softer and more vascular, and the organ larger than usual, Med. and Phys. Journ. Lond. vol. xxxvii.

¹ The blood-vessels were observed to be very large, Med. Chir. Trans. Lond. vol. vii. The uterine vessels were much enlarged, Med. and Phys. Journ. vol. xxxviii. In Dr. King's and Mr. Messer's cases, the vessels were enlarged and numerous.

² *Nihil præter tenacem et flavescentem mucum, mollemque poroso-villosam et valvulosam quasi turgescientem membranam, undique uteri parietes et tubas investientem invenimus*; Boehm. Obs. Anat. Rar. Fas. i. p. 27; Med. Chir. Trans. Lond. vol. viii. xiii.; Dr. Ingleby's cases, Med. Surg. Journ. Ed. vol. xlii; Breschet's Mem.; Med. Chir. Rev. vol. v.; Journ. de Med. 1814; Archiv. Gen. vol. xi.; Nuov. Journ. de Med. vol. ii.; Med. and Phys. Journ. Lond. vol. xxxvii.; Trans. Roy. Soc. Edin. vol. v.; Obstet. Med. vol. ii.; Med. Trans. Lond. vol. vi.

³ The cervix uteri was filled with gelatinous matter, Trans. for the Improv. of Med. Chir. Knowl. vol. i. p. 216.

⁴ Med. Chir. Trans. Lond. vol. vii. There was neither decidua nor gelatinous mucus in the cases related by Drs. Smith, King, Murphy, and Mr. Messer.

accompany the efforts that are from time to time renewed for the emancipation of the foetus; or in other words, those abdominal pains which resemble parturient action.

Although, from the time of Boehmerus to the present day, many writers have spoken most pointedly as to the presence of decidua in a great majority of Fallopian gestations, yet their statements have recently been called in question.¹ In the present age, however, it is fashionable to doubt every thing; and it is well known that some persons, in their morbid avidity to acquire a character for originality, have not, when it suited their fancy, hesitated to deny the evidence of their own senses.

The bodies occasionally extruded per vaginam, and viewed by the narrators of some of those cases as the placenta, could be nothing else than portions of the decidua conjoined with coagulated blood.² As might naturally be inferred, in many of the cases that have been recorded, *corpora lutea*, or their remains, are found in the ovaries.³ After the extinction of foetal life, the uterus, in obedience to the laws by which it is influenced in natural pregnancies, is progressively restored to its pristine condition.

¹ Dr. Robert Lee, Med. Gaz. Lond. vol. vii. p. 11.

² Note, No. iv. p. 105 of this Memoir; also Biblioth. Med. vol. xxxvii.; Journ. Gener. de Med. Chir. et Pharm. vols. xv. and xxvii.; Bonnie, *Memorie*, p. 72; Med. Annals, Ed. vol. iii. p. 379; Recueil Period. An. 6, vol. xiv. p. 289.

³ Med. Chir. Trans. Lond. vols. vii. viii. xiii.; Dr. Ingleby's cases, Med. and Surg. Journ. Edin. vol. xlii.; Archiv. Gener. vol. xi.; Med. and Phys. Journ. Lond. vol. xxxvii.

TREATMENT.

THIS subject will be considered under *four heads*; *first*, the precautions required to retard or prevent laceration of the cyst; *secondly*, the measures necessary to moderate the hæmorrhage after laceration; *thirdly*, the management after the extinction of foetal life; *fourthly*, the steps to be pursued for the emancipation of the foetus.

As it may readily be gleaned from the cases offered in illustration of the ovarian and tubal varieties, and from a few of those of the ovario-tubal order, or what some people consider ventral gestation, that early laceration or sloughing of the cyst which contains the foetus, is fatal to the parent, and more especially when an ovary or tube is involved, a highly important object, therefore, must be to retard this destructive process, until gestation is farther advanced; when, as is satisfactorily proved by examples belonging to the three orders just particularized, the event is by no means so disastrous to the patient. Unfortunately, we are rarely aware of the presence of extra-uterine gestation, until lesion of structure be so far advanced, that sloughing or laceration cannot be averted, or until these changes have actually happened. And as, moreover, some of the causes which must be admitted to accelerate these conditions are *constantly* in operation, such, for example, as the action of the agents concerned in all the great functions of the animal economy, as respiration, the exoneration of the abdominal contents, and the various *unavoidable* corporeal exertions, the hopelessness will at once be perceived of our being successful in averting laceration or sloughing of the cyst. When, however, with the usual phenomena of preg-

nancy, the patient has occasional paroxysms of acute abdominal pains, sanguineous discharges per vaginam, with tension or circumscribed swelling in either iliac region; or that a double tumour can be felt in, or encroaching upon, the pelvis; and the os uteri is so much elevated in the brim, that it is reached with difficulty, or that it cannot be felt at all, we should represent to the patient that every action tending to compress the tumour, as *undue exertion* of every kind, whether during the function of respiration, the evacuation of the abdominal contents, or during locomotion, must be sedulously avoided. It will be equally necessary to guard against every circumstance likely to excite uterine irritation, whether arising from mental emotions, or from causes acting more immediately on the organ itself.¹ When uneasiness arises prompt efforts must be made to allay it by the most energetic treatment, as the application of an adequate number of leeches, or the decisive use of the lancet, according to the habit of the patient. With the foregoing measures, a full dose of the sedative solution of opium, and absolute quiet and rest, must be conjoined. The patient should be cautioned against stimuli of every description, the artificial excitement which may arise from an overheated apartment, and from an overload of bed clothes.

When, by the abrupt cessation of pain, an ensanguined countenance, a sudden reduction in the energy of the vascular system, and an increasing sense of fluctuation in the abdominal cavity, there is evidence of internal hæmorrhage and formidable structural lesion, every effort must be promptly directed towards moderating the effusion, and supporting the vital powers. The head of the patient must be placed lower

¹ Of the injurious influence of uterine irritation, the case quoted from the 28th volume of the Archives Gen. de Med., affords a satisfactory proof. The patient conceived of the extra-uterine fœtus, February 26, 1817, and her husband died the 3d of March following. She remained a widow two years; and then, while in the enjoyment of good health, she married again, contrary to the advice of friends. Although there was no issue by this second union, yet very soon thereafter her general health began to suffer, and she died on the 16th March 1824, when the extra-uterine fœtus was removed. Note 3, Mem. p. 129.

than the trunk, and the abdomen compressed to as great an extent as can be supported by the sufferer. Compression of the abdomen is suggested by the fact, that when rupture or sloughing of the cyst happens in advanced gestation, the effects are by no means so disastrous as when these changes occur in the early months, from the circumstance, it may be presumed, of the hæmorrhage being moderated by the reciprocal pressure which the ovum and the ambient parts exert upon each other, being so much more considerable in the latter months. Powerful doses of solid opium and acetate of lead, must be exhibited; and to moderate the effusion of blood, and accelerate coagulation of it, pounded ice, or some other refrigerant agent, should be applied to the lower part of the abdomen. But while we endeavour, by the application of cold, to moderate the impetus of the circulation in the lower part of the abdomen, the vital powers must be supported by the internal use of stimuli, and the application of artificial heat to the lower extremities, and other parts of the body.

As it may be gleaned from the foregoing observations, that in a considerable number of instances, after the extinction of its life, the foetus has remained for a long series of years in the abdomen of its parent, with little inconvenience to her; the objects contemplated by the *third indication*, therefore, are, *first*, to arrest the tendency to inflammation, abscess, and consequent protracted suffering; and, *secondly*, to secure the patient, if possible, from being under the necessity of submitting to a severe surgical operation. The extinction of foetal life should be determined by auscultation; but without this test, which assuredly is the most satisfactory that can be resorted to, no doubt need be entertained of the death of the foetus, where violent struggles have been succeeded by total cessation of motion, pains resembling those of labour, uterine discharges, turgescence of the mammæ, the return of the catamenia, and a reduction of the abdominal tumour. Under the foregoing circumstances, there cannot be a doubt, that, by avoiding all active exertion, every cause of excitement, leading a life of retirement, and observing abstemious habits,

much may be accomplished to attain the objects in view. Constipation must be sedulously avoided, to prevent irritation from this source being instrumental in exciting morbid action in other parts; and the least irritating aperients are to be employed when such agents are required. Those pains in resemblance of uterine action, which are from time to time renewed, must be promptly allayed by adequate doses of opium, preceded, if necessary, by the application of leeches, or the use of the lancet, according to the habit of the patient.

The *fourth indication*, or the emancipation of the foetus, whether dead or alive, resolves itself, *first*, into a consideration of the circumstances under which the operation of gastrotomy has been performed *in extra-uterine gestation*, with safety to the parent; *secondly*, those under which a preference should be given to the extraction of the foetus by an incision through the walls of the vagina; *thirdly*, the management of the case where the decomposed structures are forcing an exit through the anterior parietes of the abdomen; and, *fourthly*, where the same process is going on per rectum.

As the terms Gastrotomy and Cæsarean section are often confounded, it may be proper to premise, that the former ought to be restricted to those cases only in which the peritoneal cavity is laid open; and the latter to those in which the simultaneous section of the abdominal and uterine parietes is performed. Mathew Cornax¹ in 1550, and Felix Platerus² in 1590, were the first who published cases in which this practice was adopted with success; but their operations merely consisted in the extension of apertures which had been previously formed in the abdominal parietes in consequence of the bursting of abscesses arising from inflammation excited by the presence of the extra-uterine foetus. The illustrations recorded by Primrose,³ Hildanus,⁴ and Cyprianus,⁵ also of the same nature, are highly interesting. The patient of the former,

¹ Sue. Ess. Hist. des Accouch., vol. ii. p. 61.

² Spachii de Script. Veter.

³ Primrose, Morb. Mul., Lib. iv. p. 316.

⁴ Fabric. Hildan., p. 908.

⁵ Cypriani, Epist. ad Thomam Millington.

during the retention of the extra-uterine foetus, conceived again, when the product was also extra-uterine, and the bones of both were afterwards evacuated in succession,—those of one by an abscess at the right, and those of the other by a similar process at the left side of the umbilicus. The conduct of Cyprianus, to say the least of it, was remarkable for want of tenderness towards his patient; as, after enlarging the pre-existing aperture, he not only introduced his own hand into the abdominal cavity, but permitted others to do the same; the patient, however, recovered so well, that two years after the operation, she produced one child naturally, and twelve months thereafter, twins.

The success which was said to have attended the performance of the Cæsarean section by continental practitioners during the last century,¹ and their frequent publication of successful instances since that period, have no doubt encouraged members of the profession in other countries to have recourse to gastrotomy in the cases under consideration. Admitting the operations in question to have been authentic, and their success as great as we have been given to understand, it will immediately be seen, however, that in all countries, when performed early, *i. e.* with a view to the preservation of the foetus, the recoveries after gastrotomy have been in the inverse ratio of those from the Cæsarean operation. Upon principle, therefore, the adoption of gastrotomy must be opposed until the excitement inseparable from gestation has subsided; the system of the parent has been restored to its unimpregnated condition, or nearly so; and nature has evinced a disposition to remove the extraneous mass, in which light the foetus, after the extinction of its life, must be viewed. When the suppurative process is established, or a breach is actually formed in the parietes of the abdomen, experience proves that the integuments may, with safety, be largely incised, or the pre-existing aperture freely dilated, with almost certain success. Of thirty cases in which gastrotomy was performed, or the breach dilated, twenty-eight patients

¹ Simon, Mem. Acad. Roy. de Chir., vol. iii. p. 210.

recovered.¹ In twelve cases of gastrotomy performed after the suppurative process was well advanced, ten of the operations were successful.² Of nine women operated on, however, during the existence of foetal life, or soon after its extinction, the whole died.³ By these fifty-one operations, only two children were preserved; and in one of these even, the details are too marvellous for belief.⁴

When a head, breech, or foot can be distinctly traced through the walls of the vagina, the section of these, with a view to the preservation of the mother and child, promises to be more successful than an incision through the abdominal parietes with the same intentions. And as, from the cyst cohering intimately with the peritoneum of the pelvic brim, we at once, by an incision through the walls of the vagina, enter the sac which contains the foetus, this must be a much more eligible operation in the cases particularised than gastrotomy, by which we unavoidably expose the whole peritoneal cavity. In nine cases in which the vaginal incision was practised, three mothers and their infants were preserved;⁵ in two instances the mother only recovered;⁶ on one occasion, the child

¹ Cornax, l. c. Platerus, l. c. Manget. Thesaur. Anat., l. c. Cyprrianus, l. c.; Ruleau, Oper. Cæs., l. c.; Phil. Trans., vols. iv.—viii., ix., x.; Hist. Acad. Roy. des Sci. 1776; Breyer. Comment. de Lips., Dec. 2, Suppl., p. 660; Weinhard, Hertog, Gassar, Goney, Denys, Solingen, Spoering, Sprengel, Hist. de Med., vol. vii; Med. Comment., Edin., vol. ii. p. 72; vol. xvii. p. 481; Med. Phys. Journ., Lond., vols. xxxv., xlix. lviii. lix.; Med. Obs. Inquir., vol. ii.; Archiv. Gen., vol. ix.; Med. Rec. and Research. Lancet, 1835—36.

² Hildanus, l. c.; Primrose, l. c.; Rungius, Sprengel, Hist. de Med. vol. vii.; Heister, vol. ii. chap. 113; Med. Fac. and Obs., vol. i.; Mem. Med. Soc. Lond., vol. iv.; Med. Chir. Rev. Lond., vol. iv.; Archiv. Gen., vol. xxv.; Archiv. Gen., June 1838; Journ. Med. Sci. Ed., No. 3, p. 223.

³ Mem. Med. Soc. Lond., vol. iii.; Comment. de Rebus., vol. xxxv.; Journ. de Med. Chir. Pharm., &c. vol. xxii.; Nouv. Journ. de Med., vols. x. xv.; Bononiensi. Philadelphia Journ., l. c.; Lond. Med. and Phys. Journ., vol. xiv.; Act. Lips., 1719; Med. and Surg. Journ. Lond., vol. iv.; Med. Chir. Rev. vol. iv.

⁴ Polinus, Mem., p. 3; Journ. de Med. vol. xv.

⁵ Med. Chir. Journ. vol. ii., a very marvellous American case. Med. Repos. Lond. vol. xii.; Archiv. Gen. vol. xxi.

⁶ Journ. des Savans, 1722; Sabatier, Med. Oper. vol. i.

only was preserved;¹ and in three cases, both mother and child perished.²

From the foregoing results it is quite obvious, that except in cases where the vaginal incision would be eligible, nature, as was observed by Levrèt and Sabatier,³ ought in a great measure to be left to her own resources. The section of the abdominal parietes is justifiable, and ought certainly to be practised whenever the fluid contents of the abscess have approached the surface, and the higher degree of excitement consequent on the suppurative action has to a considerable extent, or entirely, subsided; or should the abscess have burst, an early opportunity of enlarging the opening should be embraced. It would be superfluous to say much regarding the situation, direction, or extent of the incision, as these points ought to be reserved for the judgment of the practitioner, who must be guided by circumstances. The situation of the incision should be such as to facilitate the escape of matter; its direction ought to be regulated by the position of the abscess; and it should be free, to prevent the ambient parts being injured during the extraction of the foetal structures. Profuse hæmorrhage may attend the operation,⁴ and must be treated upon general principles. During the protracted, and often extensive discharges of pus, the system must be supported by cordials, generous diet, and the enjoyment of pure air; and when the patient is recumbent, the trunk must be so placed, that the matter shall be encouraged to flow from the wound. As the placenta, when long retained, is destroyed during the suppurative process, except in some rare instances,⁵ and removed from the abdominal cavity with the

¹ *Nouv. Journ. de Med. et Chir., &c.* vol. i.

² *Nouv. Journ. de Med. et Chir.* vol. iv.; *Bullet de la Soc. d'Emul*, May and June 1818; *Med. Chir. Trans. Lond.*, vol. xiii.

³ *Dict. des Sci. Med.* vol. xvii. p. 455.

⁴ *Med. Rec. and Researches.*

⁵ Duverney relates a case where the foetus was extracted from an abscess at the groin, and the placenta was not decomposed, vol. ii. Placenta not decomposed though retained thirty-three years; *Journ. de Med. Chir. Pharm., &c.* vol. lxx. Placenta not destroyed though retained thirty years, *Hist. de l'Acad. Roy. des Sci.*, 1748.

other decomposed structures, or cannot be discovered,¹ this discloses to us the important fact, that the retention of the mass may be permitted without any detriment to the parent; while it can scarcely be doubted, that the irritation which could not fail to be produced by groping for it among the abdominal viscera, or the hæmorrhage arising from its detachment, might be succeeded by formidable effects. At one period it was supposed that the placenta could not be suffered to remain in the abdominal cavity with impunity; but it may be asked, can the retention of the mass be more injurious to the patient than that of a full grown foetus, which, as we are now aware, may remain in the abdominal cavity for a long series of years, without any injurious effect?

Should symptoms of peritoneal excitement arise after the removal of the foetus, by an incision through the abdominal or vaginal parietes, leeches in adequate numbers must be applied upon appropriate points, or blood removed from the general system, according to the habit of the patient, and the urgency of the symptoms. And to subdue irritation, as well as to prevent extraneous matters lodging in the vagina, warm water should frequently be injected into that canal. When the bowels are confined, except under urgent circumstances, enemata, or the mildest aperients should be ordered.

The colon or rectum may be known to be involved, in consequence of the approach of the decomposed structures, by the patient having incessant tenesmus, and frequent desire for micturition; effusion of blood, or some offensive discharge per anum; a sense of pricking, or severe pain in that passage; and, finally, the evacuation of some portions of bone in the excreta. Enemata of warm water, to allay irritation, and to prevent the accumulation of acrid matter, must be frequently employed, until the decomposed structures have all been evacuated.

When the contents of the abscess and foetal structures are

¹ Med. Comment. Edin., vol. xvii. Recueil Period. de la Societ. de Med. de Paris, vol. xiv. an. 6.; Med. Annals, Edin., vol. iv.; Denman's Engravings.

disposed to penetrate the parietes of the vagina, which, however, rarely happens, the natural secretions from the genital organs increase in quantity, and assume an offensive aspect; there is strangury, and frequent desire for micturition; much uneasiness in the hypogastrium, and along the genital canal; and, finally, pus and decomposed structures are discharged. The same general treatment must be observed, when the abscess bursts into the rectum, or discharges its contents per vaginam, as when it effects a breach in the abdominal parietes; and the accumulation of the morbid secretions, and of other extraneous matters, must be obviated by the frequent use of injections of warm water, or of the Decoct. Anthem. Nob. in a tepid state.



THE END.



